

Children of Mercury.

Studies on the transmission of geometrical design knowledge
in the Netherlandish workshop practice: 1480-1560

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Introduction

According to the late medieval and early modern astrological concept of the “Planetary Children”, a person who was born under the sign of Mercury was destined to become a philosopher, doctor, rhetorician, sculptor, goldsmith, or a painter.¹ These were professions, closely related to knowledge of the Liberal Arts. This is a recurring subject in early modern iconography and was depicted by various artists since the early 15th-century. Perhaps one of the best-known depictions of the children of Mercury was made in the so-called House-book (ca. 1475-80), which is often considered one of the finest manuscripts documenting German court life at the brink between a holistic manner of perceiving the world and a scientific way of thinking (see cover image).² In this representation of the Children of Mercury, the gods’ messenger flies in the sky on horseback, flanked by the Zodiac symbols of Gemini and Virgo. Before humanist artists such as Albrecht Dürer rediscovered the peripatetic notion of Saturn’s melancholy as the source and cause of the artists’ creative genius, it was Mercury who ruled over the industrious and intellectual professions.³ In the drawing, Mercury’s children are shown in their professional activities and they are described in the flanking verses on the opposite folio: “fine scholars and good writers, goldsmiths, painters, sculptors and makers of nice organs and clocks”.⁴ All the described (and depicted) craftsmen applied their knowledge of the liberal arts and were named as *artists*, as in practitioners of the liberal arts. While good writers would have been dependent on their knowledge of the Trivium (Rhetorica, Grammatica and Logica), the other learned children of Mercury such as musicians, sculptors and painters used the arts of the Quadrivium (Arthmetica, Geometria, Musica and Astrologia).⁵ It are these Children of Mercury - humanists, painters, goldsmiths, printmakers and sculptors - which will be the main protagonists of this study, as their role in the dissemination of architectural knowledge will be examined.

¹ The theme became popular in Renaissance Italy in the early fifteenth century, and by the second half of the century also appeared in Germany and the Low Countries. One of the first appearances was in the decoration of the Sala della Ragione in Padova, ca. 1420. Hauber 1916; Garin 1984; Willemsen 2008, pp. 199-212; Shamos 2013.

² Filedt-Kok 1985, pp. 218-24. The manuscript gave its name to one of the earliest German drypoint engravers and the greater part of its pages not only consists of representations of German court life, but equally depicts artisans involved in making hydraulic instruments, military encampments, mining, and military engineering. The manuscript was sold by the Waldburg-Wolfegg family in February 2008 and is now in the hands of a new private collector.

³ Klibansky, Panofsky and Saxl 1964.

⁴ *‘Sie sint wol gelert vnd gut schreiber / Goltsmid malar vnd pildsneider / Orgeln machen vnd orglocken fein’*. Hausbuch, fol. 15.

⁵ In some textual references to these planetary children, the link between these professions and the liberal arts, is made more explicit; such as in a 1551 almanac in which is explained how Mercury ruled over “philosophers, doctors, astronomers, orators, rhetoricians, merchants, lawyers, printers, and all the clever artists concerned with the liberal arts” (*Philosophi, Medici, Astronomi, Orateurs, Rhetorikers, Coophuyden, Advocaten, Scrivers, Boeckdruckers, ende alle scherpsinighe constenaers die met vryen consten omgaen.*) Sylvius 1551, fol. 10v. Also see Honig 1998, p. 2.

Research subject and terminology

The aim of this study is to examine the transfer of geometrical design knowledge between different professional groups in the early modern Low Countries between 1480 and 1560. Several scholars have remarked a noticeable change in the Netherlandish architectural design practice of the early sixteenth century, which involved a set of new class of architectural designers (e.g. painters, figurative sculptors, goldsmiths, and printmakers) who would provide advice, drawings and designs for architectural commissions.⁶ The phenomenon of the painter-architect has often been seen as a predecessor to Rubens' activities in architectural design testified by the publication of the *Palazzi di Genova* (1622), the designs for the Antwerp Jesuit Church and the design for his own luxurious Antwerp studio. The involvement of painters as new architectural designers previously explained in the context of a changing intellectual and art theoretical climate in the Low Countries with the introduction of the writings of Vitruvius (and in extenso Alberti) who lauded the image of the versatile architect who is not just a building master, but also an engineer, a painter and an intellectual. Although influences from Italian and classical theorists on design concepts and architecture in the north can hardly be ignored, this study hopes to offer an additional explanatory model for artists' versatility. By examining the internal dissemination processes of architectural knowledge between workshops, this research aims to shed a light on the role of architectural drawings as a means of communication, and of social and professional networking as ways of spreading technical know-how. Can the involvement of painters or sculptors in the architectural planning process truly be considered as a radical change within the architectural design tradition? Was their role limited to their knowledge of Antique ornamental language? How did this new class of designers acquire geometrical design knowledge? How is this reflected in the daily workshop practice? How did this newly acquired skill affect the social position of the artist? And lastly, what was the role of the early printmakers in the dissemination of architectural design to a wider public?

This period between 1480 and 1560 can be considered as a crucial transition in the professional status of artists and artisans with several interconnected changes in the professional Netherlandish art market, which also impacted the role of architectural design within the early modern urban and courtly society. Firstly, changes in the building organisation influenced the professional identity of the architect. His position evolved from a master of the works who was present and active on the building lodge for a large period of time, towards a more independent architect capable of managing several

⁶ Meischke 1988a (1952); Miedema 1980; Baudouin 2002; Gerritsen 2006, pp. 22-23; Lombaerde 2014; Hurx 2018, pp. 368-70.

building sites at the same time and whose role had become that of a general contractor, entrepreneur and professional draftsman.⁷ Secondly, changes occurred in the workshop organisation of painters, wood carvers or sculptors, as they re-organised production practices in a pre-industrial manner as a response to the burgeoning art market (particularly in Antwerp) and its increasing demand for luxury products offered to a much wider clientele, both socially and geographically.⁸ A third major professional change in the artistic practice was the addition of printmakers as new professional players in the (mass-)production of images in the early modern urban environment. Although these developments have been studied within their own respective fields by architectural historians, art historians, print scholars and socio-economic historians, the goal of this research is to achieve a more interdisciplinary and cultural overview of the relationships and connections between these socio-professional changes by focussing on the communicative role of design.

Methodology and status Quaestionis

If we are to study early modern artistic relationships and the dissemination of designing knowledge, it is essential to look beyond traditional disciplinary boundaries and traditional academic categories such as painting, architecture, sculpture, and woodcarving. During the studied period, such categories were less fixed, as it is rather difficult to make a clear distinction between the professional background and responsibilities of a sculptor and a building master. One cannot do any justice to the intricate complex relationships which are inherent to the early modern design practice. Since early modern guilds assembled a great variety of crafts under one social, religious, and professional divider, it is obvious that any study of the early sixteenth-century design practice and its dissemination, requires a look beyond our present academic compartmentalisation.

This demarcation of artistic disciplines has a long history which finds its origins in the Renaissance itself, starting with Leon Battista Alberti's focus on *Pittura*, *Statua* and *Aedificatoria* in three subsequent treatises. By treating the three art forms as individual notions, the Italian humanist architect projected an idealised situation rather than a description of daily workshop practice. A further emphasis on these three fields as independent art forms (though joined by *disegno*) was famously made by Giorgio Vasari in his *Lives of the Most Excellent Painters, Sculptors, and Architects* (1550/1568) and put into practice in Vasari's Florentine Accademia del Disegno in 1563. As heirs to

⁷ Hurx 2018.

⁸ John Montias considered this growing production specialisation as part of a general "process innovation", which along with product innovation led to changes in the art market. Montias 1989.

Vasari's Academy both Giovanni Pietro Bellori's Roman *Accademia di San Luca* and the French *Académie Royale* (1648) reinforced this compartmentalisation. Not only had this theoretical system led to a dominance of painting as the key subject taught at these academies, but it also became isolated from other art mediums. This academic separation has also had vast implications in the study of transdisciplinary activities of painters, architects, or sculptors. It greatly influenced our present art historical methodology in as much as that in academic environments architectural history and art history have often become two individual disciplines without many interdisciplinary bridges. Recently, Cammy Brothers addressed this same problem when studying Michelangelo's architectural drawings:

*"Ironically, the trend in art history and architectural history to move across disciplinary boundaries into economics, history, sociology, anthropology, and other areas has not been accompanied by a similar sense of adventure in challenging the separation of artistic media into distinct categories. It is perhaps more common to find a specialist on painting delving into economic research than considering the relationship between painting and decorative arts."*⁹

The correlation between an artist's activities as painter, sculptor, cartographer, printmaker, and architect in art historical literature on Italian Renaissance art has become an almost self-evident concept, considered as part of the Aristotelian attitude towards knowledge that fits within the myth of the Renaissance polymath and which dates to Jacob Burckhardt himself. For Burckhardt, Leon Battista Alberti's talent of combining poetry with architecture, with painting, and with sculpture was the perfect embodiment of the Renaissance artist, who was only to be surpassed by Leonardo da Vinci.¹⁰ Although this nineteenth century point of view on the versatile Italian artist has been modified, nuanced, and reinterpreted in more recent literature, the Burckhardtian ghost persistently hunts the scholarly perception of the same phenomenon in the north. Authors such as Miranda Belozerskaya have made successful attempts to diminish the influential role played by Italian styles and taste patterns and painted a more nuanced picture in which the artistic milieu of Burgundian court was at least equally influential.¹¹ In addition, she also included other artistic fields such as the art of embroiders, goldsmiths and tapestry makers and designers, in order to nuance the role played by panel painters within the artistic. Yet quite often a northern artist's interest or involvement in a design commission regarding architecture, metalwork, or architectural sculpture, is explained by the quick answer of Italian influence, either in the form of treatises or by a personal journey south. When discussing the versatility in designing skills of Netherlandish artists - or northern artists in general - this is often interpreted as the result of the increased contacts with the Italian Peninsula and humanization

⁹ Brothers 2008, p. 3.

¹⁰ Burckhardt 1860, pp. 103-4.

¹¹ Belozerskaya 2002; Belozerskaya 2005.

of the artistic milieu. In addition, surprisingly little attention has been paid by scholars to the activities of early modern Netherlandish painters as designers for other media. Although sometimes briefly mentioned in monographic studies, the involvement of Netherlandish painters in the design of architecture, sculpture, cartography, or other media is often treated rather marginally and has not yet received attention as a more widespread phenomenon.¹²

The interaction between different professional players of the early modern artistic field, and the dissemination of technical and artistic knowledge which this generates, have remained difficult to answer due to the interdisciplinary nature of the research question. Architectural design and drawing practices, for example, have been strongly integrated within the research of scholarship on Late Medieval and Renaissance architectural history, ever since the publication of Wolfgang Lotz' 1956 influential essay, *"The Rendering of the Interior in Architectural Drawings in the Renaissance"*.¹³ For the most part, scholarship on architectural drawing practice has focussed on the use of architectural drawings as evidence for documenting an architect's career or dating and attributing individual building projects.¹⁴ These drawings have been less studied within a wider cultural context. Topics such as their role as communicator between artists, patrons or the beholder in general are now starting to be addressed in scholarship on the Italian architectural drawing.¹⁵ Although the Italian Renaissance artist has been interpreted as the artistic polymaths par excellence, it remained difficult to explain this artistic versatility beyond certain methodological pitfalls or stopgaps such as the genius of the 'Renaissance man' created by a more liberal cultural climate, or by a changing pattern of humanistic patronage. The same can be said about Margot and Rudolf Wittkower's influential *"Born under Saturn"* (to which the title of this book is intended as a playful pun), in which the authors collected a series of anecdotal instances to underline the 'genius' and particular nature of the Renaissance artist.¹⁶

Even though scholarship in which traditional architectural history is combined with the history of science, painting, print culture, cartography and applied arts remains a rarity, some fundamental publications have paved the way for the present research and can be considered as quintessential cornerstones. Offering a methodological example and interdisciplinary research method is Martin Kemp's study on the role of scientific knowledge and geometry on Italian Renaissance artists.¹⁷ Starting from his expertise on Leonardo, Kemp acknowledges that the development of the changing role of the

¹² See for example, Huvenne 1984; Bruijnen 2011; Galand 2013.

¹³ Lotz 1956.

¹⁴ For a recent historiography of scholarship on Italian Renaissance architectural drawing practice, see Brothers 2017.

¹⁵ See for example some recent conferences: University of Washington in Rome Symposium "Drawing and the Renaissance Architect", Rome 2011; KWAU Conference "Designing Architecture in Sixteenth-century Europe: Drawing as a Medium for Architectural Innovation", Amsterdam 2013.

¹⁶ Wittkower & Wittkower 1963.

¹⁷ Kemp 1990.

artist in early modern Italy is to be explained by the interplay between different artistic players such as goldsmiths, painters and building masters, which had led to the growing importance of knowledge of geometry, perspective and optics by artists and their humanist patrons alike. In addition, Richard A. Goldthwaite, in his pivotal work on the Florentine building economy, also recognizes the crucial link between design practices used by goldsmiths and architects, and the changing role of the painter during the fifteenth century and early sixteenth century.¹⁸ For the artistic production process north of the Alps, the seminal study by Hans Huth (first published in 1926) on the workshop practice in late Gothic and early Renaissance Germany already touched upon many issues which will here be discussed within the Netherlandish context, such as the communicative function of design, the collaboration between various crafts and the role of goldsmiths within the early modern design practice.¹⁹

Instrumental to this present book, is the role of architectural drawings and their function in disseminating design knowledge. However, this study is not an attempt to provide an overview of the architectural drawing practice in the Low Countries during the sixteenth century. In this regard, it distinguishes itself from earlier studies such as those of Elske Gerritsen and Eva Roëll.²⁰ Although architectural drawings and the drawing practice are used as a methodological instrument, the focus of the research is on the professional identity of the draftsman, rather than on the drawing practice itself. Instrumental to answering the central research questions of which professional players are involved in architectural design and how technical and architectural knowledge is disseminated between these different professional groups in the early modern Low Countries, are the guild registrars and statutes, commissions, accounts, court trails, letters, and architectural treatises. In addition to written documents, the most crucial information is provided by a wide range of visual and material sources: architectural drawings, ornament prints, architecture, cartography, panel painting and sketchbooks. From the outset of this research, it has been the conviction that the understanding of the interplay between different professional players requires an interdisciplinary approach. This approach is strongly embedded within what Michael Baxandall has famously coined as the “Period-eye”, in which cultural factors of production, patronage and social conditions determined the contemporary visual experience.²¹ This offers a very wide and versatile look on all those involved in the designing process. The downside of this approach is that the large amount of material available operates like quicksand in which it is easy to drown. Therefore, it is important to stress that this study has no intention to be an exhaustive overview, but rather functions as a series of interrelated studies on the relationship between architectural design and the visual arts in the Low Countries between 1480 and 1560.

¹⁸ Goldthwaite 1980.

¹⁹ Huth 1967.

²⁰ Gerritsen 2006; Roëll 2010.

²¹ Baxandall 1972.

The study of the architectural design and drawing practice of the northern Europe has often been approached from the perspective of the activities of the building lodge, with little room for interdisciplinary excursions.²² In recent years, however, scholarship on northern sixteenth-century architectural drawings and designing practice has slowly become more interdisciplinary, for example in recent publications on the architectural drawings of Hermann Visscher the Younger in Germany²³, Jacques Androuet du Cerceau²⁴, and the architectural drawing practice in England.²⁵ The starting point for the study of architectural design practice in the Low countries can be found in the seminal research work of Ruud Meischke on architectural drawings and the building practice during the fifteenth and sixteenth centuries. His 1952 article on Netherlandish architectural drawings still forms one of the cornerstones of the present research as Meischke offered a multi-media approach in which he was one of the first to address the matter of cross-fertilisation between professional strata involved in architectural design.²⁶ Beside his irrefutable role in the scholarship of gothic building practices in general, Meischke also emphasised the increasing involvement of painters or sculptors at the dawn of the sixteenth century. He was able to look beyond the disciplinary boundaries of architectural history and included sculptors, painters, and early printmakers into his research in order to explain the changing role of the architect at the advent of the Renaissance. He offered a relatively thorough overview of drawing and design practices, allowing for a first preliminary corpus of late medieval and early Renaissance architectural drawings in the Low Countries. Although in his explanation of this phenomenon the study suffers from a largely Italo-centric point of view by today's standards, its interdisciplinary approach was far ahead of its time and offered an essential starting point for the present study.

Many of Meischke's fundamental socio-economic research questions on the building trade, design practice and position of the architect were recently further developed in Merlijn Hurx' dissertation. This recent study on the changing architectural design practice in the Low Countries between 1350 and 1530 is probably the best documented study on the late Medieval building practice in this region to date.²⁷ Based on the study of building contracts, ordinances, accounts, and architectural drawings, Hurx examines the building market in the Low Countries, with a special focus on the growing intellectual independence of the architect by the second half of the fifteenth century.

²² The historiography of the north European drawing and design practice is extensive. We will limit ourselves here to the most influential publications in the field. Studied best is the rich drawing corpus from the French and German building lodges: Branner 1958; Frankl 1960; Branner 1963; Seeliger-Zeiss 1967; Shelby 1972; Barnes 1971; Bucher 1972; Shelby 1977; Bucher 1979; Recht 1989; Müller 1990; Recht 1995; Davis 2002; Böker 2005; Barnes 2009; Böker 2011; Bork 2011b; Böker 2013.

²³ Lang 2012.

²⁴ Guillaume & Fuhring 2010.

²⁵ Gerbino & Johnston 2009.

²⁶ Meischke 1988a.

²⁷ Hurx 2012; Hurx 2018.

This socio-economic study of the building market forms one of the key foundations for the present research. For a later period, the architectural drawing practice in the Low Countries was examined by Elske Gerritsen, concentrating on architectural drawings in the building practice of the Dutch Republic during the seventeenth century, and subsequently by Eva Roëll focussing on architectural drawings of the Dutch Republic during the eighteenth century.²⁸ Equally important for the present research is unquestionably the research of Krista De Jonge on the subject of sixteenth-century designing practice and the dissemination of stylistic typologies in the Low Countries.²⁹

Because of its interdisciplinary approach to design practice, the present research is embedded within several current research traditions outside architectural history, such as recent studies on Netherlandish workshop practice and early modern urban guilds.³⁰ Inspirational was Matt Kavalier's study of the phenomenon of what he coined with the playful oxymoron *Renaissance Gothic*, in which he examined the co-existence and the interplay between overlapping stylistic typologies from a variety of media and sources, including prints, sculpture, literature, applied arts and painted representations of architecture.³¹ For the study of the co-relation between painters and the developing field of cartography, examined in chapter four, the basis was laid by the exhibition catalogue "*Met passer en penseel*", which explored relationships between cartography, land-surveying, and the development of the landscape as an individual artistic genre in the Duchy of Brabant.³² Also working on the border between cartography and art history is the recent scholarship of Pieter Martens, where the focus is more on the role of military campaigns in relation to mapping campaigns.³³

Chronological periodisation will always be an arbitrary matter, no matter how well argued. It was decided to limit the period to the first half of the century, rather than provide an overview of the 'long sixteenth century'. This allows for a more in-depth analysis of the origins and first developments of the 'painter-architect' by focussing on the genesis of the phenomenon during two generations of artists between roughly 1480 and 1560. By the 1560s a new generation of designers was starting to emerge and the attitude towards visual artists involved in architecture was changing as it became more normalised by the time that artists such as Hans Vredeman de Vries (1527-1607) entered the art historical stage; only to be followed by the generation of 'painter-architects' such as Peter Paul Rubens

²⁸ Gerritsen 2006; Roëll 2010.

²⁹ On the sixteenth-century design practice, esp. see De Jonge 2007; De Jonge 2010a; De Jonge 2010b; De Jonge 2013a; De Jonge 2014b.

³⁰ The literature on this subject is extensive. Some pivotal examples with further literature, are: Van der Wee 1963; Campbell 1976; Van der Wee 1988; Van der Stock 1993; Lis & Soly 1996; Dambryne 2002; Stabel 2004; Faries 2006; Prak, et. al. 2006; De Munck 2007; Helmus 2010; Ainsworth 2017.

³¹ Kavalier 2000; Kavalier 2012.

³² Brussels 2000. The interplay between cartography and painters has also been approached by art historians in tracing the developments of landscape painting, see Alpers 1983; Büttner 2000.

³³ Martens 2007; Martens 2019.

(1577 – 1640) or Wenceslas Cobergher (1556/61 – 1634). This changing attitude is also marked by the design and construction of the Antwerp Town hall in the early 1560, which can be considered as a culmination point of a new tradition of designing artists, and functions as a symbolic end date for this study. Examined will be the road which led towards the establishment of the phenomenon of the ‘painter-architect’ since the late fifteenth century. Since most of the Netherlandish architectural drawings are only as old as the 1470s and 1480s, this seems like a logical point of departure. Many of the artists whose careers are discussed, were born around the 1480s, and they form a crucial bridging generation in the attitude towards architectural design. Additionally, 1480 marks a turning point on a stylistic level as it saw the first and hesitant introduction of Antique ornament, first in architectural representations on a two-dimensional plain such as panel painting or tapestry and by the late 1520s in architecture and architectural sculpture as well.³⁴ The geographical limitation is much more self-evident since the book deals with the artistic production in the Low Countries before the Eighty-Years War and the political schism of the Low Countries in 1581. If the geographical balance of the case-studies has shifted slightly towards the southern Low Countries, this can be explained by the economic, cultural, and political importance of the south – especially the dutchy of Brabant – during the first half of the sixteenth century. Although the focus remains on the situation in the Low Countries, some comparisons to parallel developments in the rest of Europe – especially Germany and Italy - seem unavoidable to establish a wider European context.

To tackle this subject, it is essential to clarify certain terms and how they are used throughout this book. On several occasions, the reader will find the use of the term *architect*. Since one of the main focus points in this book is the professional positioning of architectural designers in relation to other craftsmen within the early modern building market, the term architect would seem to have much too definitive and even anachronistic nature.³⁵ Notwithstanding the semantic ambiguity of the term architect and its many contemporary equivalents (e.g. master-builder, master of the works (*werkmeester*), master mason, supervisor, geometer, engineer), the term is here applied to describe the individual who designs architectural structures on a professional level. Much in the same line, the term *architecture* could lead to some confusion. Here we chose to broaden the semantic field to a definition which would be more in line with a sixteenth-century notion of *Metselrie*, which did not only include the built edifice but anything that is architectural in its structure and ornamentation, such as sculpted retables, choir stalls, golden chalices, alabaster sculpture, or sacrament houses. Broadening this definition beyond our modern concept, allows for a more inclusive and transdisciplinary approach to architectural design, which we believe is more in line with the sixteenth century ‘period-eye’. This

³⁴ Kavalier 2012.

³⁵ On the rise and meaning of the word architect within 15th- and 16th-century Netherlandish context, see Philip 1989; Hurx 2018, pp. 34-39.

study also covers the transition from a Late '(Flamboyant or Rayonnant) gothic style towards a more classicising 'Renaissance' idiom, two styles which were able to operate harmoniously alongside each other during the course of the first decades of the century.³⁶ With the rise of this stylistic consciousness in the 1510s, the last stylistic phase of the gothic style was often mentioned in contemporary documents as *modern Gothic*, while its equally innovative Renaissance equivalent was mostly identified as *Antique*. For the general purpose of consistency and clarity we also chose to uphold these two terms.

Structure

This study is structured into three major parts. The focus of the first part is mainly on architectural drawings, design, and workshop practices. The first chapter uses the famous Utrecht court case of 1542 as a steppingstone to question who could deliver designs within the early modern guild structures and to explore the dichotomy of a continuity of traditional practices vis-à-vis a changing design practice within an urban Renaissance culture. Although this chapter is mainly based on secondary literature, it sets the scene of the corporate structure and the various craftsmen involved with architectural design. While the first chapter explores the intellectual right to design, the second chapter aims to look at the more practical meaning of the term *Disegno*, namely the physical drawing practice. Although the architectural drawing practice has recently received attention in the above-mentioned study by Hurx, the aim here is to place the architectural drawing practice within a wider professional context by comparing the existing corpus of architectural designs on paper of master masons and land surveyors with those of goldsmiths, joiners, carpenters, and painters. In addition, we will look at the social networks which allowed the transfer of technical knowledge between these professional players within the architectural design practice. This dissemination of architectural knowledge (both stylistic and technical) is reflected in one of the earliest preserved sketchbooks in the Low Countries, associated with the workshop of the Amsterdam painter Jacob Cornelisz. Van Oostanen, which is the subject of the third chapter. The sketchbook will be examined both for its sources of Antique ornament as for the employed Euclidian geometry. It offers a perfect case-study for the range of new knowledge available in the painter's studio and the applications of new geometrical knowledge. These novel methods of three-dimensional rendering and triangulation, which painters adopted from architectural design practice, are applied in the developing field of cartography. This increasing involvement of painters and their growing responsibility in the design process is studied in chapter four.

³⁶ On this stylistic pluralism and its terminology, see Van Miegroet 2001; Mensger 2008; Kavalier 2008; Kavalier 2012.

The focus of the second part is placed on the role of prints and printmakers in the dissemination of geometrical and architectural theory. In chapter five we will examine painted architecture and the role of loose-sheet prints - such as the Prevedari engraving - in the introduction of early Bramantesque notions in the development of a vernacular Antique style by local painters working for an expanding art market. This is contrasted with the career of Jan Gossart, whose painted architecture was equally imbued with the architectural novelties of Bramante, but rather through direct contact and with a more humanist learned eye. While chapter five focusses on the role of prints as catalysts for stylistic innovation, the following chapter will focus on early Netherlandish printmakers and their pivoting role in the dissemination process of architectural design knowledge. Since many early printmakers' backgrounds originated from the traditional group associated with architectural design (i.e., goldsmiths, sculptors, or masons), they held a central intermediary position in between technical design and the figurative arts. In chapter six we will particularly look at the engravings designed by two master masons (Alart Du Hameel and Johann van den Mijnnesten) and an assumed goldsmith (Master W).

The third and final part will be devoted to the implications of this geometrical knowledge on the social position of the painter and printmaker. It will be argued that for this generation of artists, knowledge of geometry (as one of the Liberal Arts) functioned as a critical instrument in the elevation of the visual artist in the growing art theoretical debate at the time. In chapter seven we will first explore the social position of practitioners of geometry (mainly goldsmiths and architects), only to further examine if the transfer of this body of knowledge to new professional players (printmakers and painters) equally implied a change in their social status. Instrumental sources for this implied change are the signatures with which early printmakers and a certain category of painters "marked" their works. Signatures and house marks by painters as a way of selling their social position on the art market will be fully explored in chapter eight. Lastly, we will broaden the theoretic debate by delving into the introduction of novel Vasarian notions of design within the humanist circles of Antwerp, Bruges and Liège and its meaning for the attitude towards this geometrically knowledgeable artist.

The three parts of this study are deeply interwoven. Each element attempts to address different aspects of the designing process in the Low Countries during the first half of the sixteenth century from a different point of view and aims to offer a fresh and interdisciplinary look at the creative process of the Renaissance artist.



·PART I·

DRAWING AND THE VERSATILITY OF
DESIGN

The autumn of the year 1560 marks a turning point in the historiography of the Renaissance of the Low Countries. This date marks the launch of the five-year building campaign of the new town hall by which the Antwerp city council wanted to affirm their role of not only one of the most prosperous cities in Northern Europe, but equally the most fashionable one.³⁷ In order to achieve this goal they selected twelve of the most renowned Netherlandish artists to submit their designs. These were painters, sculptors and printmakers who may not have had much experience on the actual building lodge.³⁸ Instead, they were visual artists who had gained a strong reputation and expertise the Antique style of architecture, and who had developed an idiosyncratic ornamental language which served as an answer to the strict Vitruvian rules or the Serlian orders as they had been introduced in the same city some twenty years earlier by a fellow artist Pieter Coecke van Aelst (1502-1550).³⁹ The list of designers included highly reputed sculptors such as Cornelis Floris (1514 – 1575), Jan d’Heere of Ghent (1502 – 1576), Willem van den Broecke, known as Paludanus (1530-1579) and Jacques Du Broeucq (ca. 1505 – 1584). Other participants to the Antwerp design competition were mainly known as engravers or painters, such as Jan Metsys (1509-1573), Hans Vredeman de Vries (1527-1609) or Lambert Suavius (ca. 1510-1567) of Liège. Just as the aesthetic quality, modulation and ornamental innovation has been perceived as a culmination of the developments in the Netherlandish Antique style, so has the design competition been regarded as an exemplary case for the growing involvement of new professional players in the architectural design process by the second half of the sixteenth century.⁴⁰ The advent of this professional change was first fully explored by Ruud Meischke in his pioneering article of 1952 on architectural design practice in the Low Countries:

“The most fundamental change occurring in the architectural designing practice during the first half of the sixteenth century [in the Low Countries], is the absolute repositioning of the architectural profession. The old profession of the master mason as it was known during the Middle Ages had waned with its gothic language. The time had come for other people to design architecture who called themselves ‘architect’. (...) In general, this development is characterized by an increasing importance of painters in architectural design.”⁴¹

Meischke proposed a paradigmatic shift between fifteenth- and sixteenth- century Netherlandish design practice with a dominant role of painters as the new professional players in the field, in addition

³⁷ Prims 1930; Corbet 1936; Duverger 1941; Bevers 1985; Lampo 1993, p. 19; Kuyper 1994, pp. 156-8.

³⁸ Rolf 1978; De Jonge 1998b; De Jonge 2004; De Jonge 2007.

³⁹ The competition only focussed on the façade of the building. For structural and building technical aspects of the design process, the expertise of members of the mason’s guild was still essential. Payments were still made to Jan Daems, Andrew de Coninck and Hendrik van Paeschen for the bricklaying and the vaulting of the cellars. Kuyper 1994, p. 157. The latter also provided building materials for the Royal Exchange in London (1566-69). Murray 1985, p. 298; Imray 1997, pp. 26-35; De Jonge 2010d, p. 190.

⁴⁰ Miedema 1980; Meischke 1988a; Kuyper 1994, pp. 150-74.

⁴¹ Meischke 1988a, pp. 178-79.

to the more traditional master mason as a designer of architecture.⁴² This new group of professional players was considered to have been responsible for redefining the concept of the architect as an independent individual responsible for the delivery of the design, rather than a master-mason active on the building lodge or connected to a repressive guild system. Further developing this argument was Frans Baudouin, who saw in the figure of Peter Paul Rubens (1577-1640) the ultimate apogee of, what he coined, the 'painter-architect'.⁴³ With his interest in architectural theory displayed in the *Palazzi di Genova*, and especially his involvement in the design of the Antwerp Jesuit Church and his own palace-like painter's studio, Rubens was considered as the ultimate example of the *Pictor Doctus*, who was able to combine his career as a painter with that of an architectural designer. By doing so, Rubens was regarded as the apogee of a long tradition which had started at the dawn of the sixteenth century.

The phenomenon of architectural commissions handed over to visual artists rather than master masons, is often explained as a result of a changing attitude towards the position of the architect instigated firstly by the introduction of Vitruvian art theory in the Low Countries and secondly by the influx of Italian architects and engineers in the Low Countries, mostly working on courtly commissions.⁴⁴ Although we do not doubt the contribution of these elements to an altering architectural culture in the north, it will be argued that this changing position of both painter and architect is a much more complex process of socio-professional dynamics within the existing guild structures. This process runs parallel to similar changes elsewhere in Europe which was already set into motion before any humanist intellectual notions of *Architectura* came into play. In this chapter, we will readdress both these traditional theories, as well as examine the architectural design process and drawing tradition in the urban guild system in the Low Countries, and finally we will look at the trajectories of geometrical knowledge through early modern networks of the family and guilds. The court case held in Utrecht in 1542 will be used as a steppingstone and framework to discuss these issues as both the responsibility to design architecture, the guild ordinances and the new architectural theory were forwarded as important arguments.

⁴² Meischke distinguished between three new professional players in the architectural designing practice at the beginning of the sixteenth century. Besides the painter-architect he also considered the sculptor-architect and military engineer as individual professional categories. Meischke 1988, pp. 181-92.

⁴³ Baudouin 2002. On Rubens and his architectural knowledge, also see Blunt 1977; Lombaerde 2008; Antwerp 2011; Lombaerde & Fabri 2018.

⁴⁴ Miedema 1980, pp. 71-85; Van den Heuvel 1991, pp. 23-48.

1. Dissecting the Antwerp-Utrecht Court Case of 1542

1.1. The case

When discussing the changing roles and positions of visual artists in the architectural design process, the court case held in Utrecht in 1542 is an inevitable and crucial document, frequently referred to in literature as a mirror of the changing professional balance and the conflict this brought about.⁴⁵ The Utrecht town carpenter and architect Willem Van Noort was accused by his former colleague, the stonemason and sculptor Jacob van der Borch, for denying him his rightful share in the profit Van Noort had made in designing architecture.⁴⁶ The work of designing and drawing plans, Van der Borch (ca. 1500-1571) insisted, could only be carried out by a member of the masons' and stonecutters' guild. Both parties could deliver credible witnesses from within the building trade to testify about the customary designing practice. While Van der Borch relied on stonecutters and masons from Kampen, such as Reyner Lambrechts Van Noort brought forward six experts from Antwerp.⁴⁷ With Antwerp being the burgeoning international city of trade and humanist culture that it was by the early 1540s, Van Noort clearly had the better hand of cards at the table: the stonecutters and sculptors (*steenhouwers ande cleynstekers*) Rombert van den Loocke, Rombout de Drijvere and Phillip Lammekens, the city's master masons (*gesworen metsere deser stadt*) Peter de Bruijne and Peter Frans, and the carpenter Peter Theels.⁴⁸ All concluded that it was common practice for craftsmen other than stonecutters or masons to deliver architectural designs, disregarding whether this was in the form of drawings, stonecutting moulds (*berderen*) or three-dimensional models.⁴⁹ In doing so, they referred both to their own experience as to other renowned colleagues. Among these references was "Meester Thomas Bologne, Italiaan" (i.e. Tomasso Vincidor), who designed the prestigious palace of Henry III of Nassau and his wife Mencía de Mendoza in Breda between 1530 and 1537.⁵⁰ It was stressed by Peter Theels that Vincidor was neither stonecutter or sculptor, but rather a painter.⁵¹ A second Italian artist named in defence of Van Noort's case was "meester Donaas (i.e. Donato de'n Boni di Pellizuolo), who

⁴⁵ Muller Fz. 1881-82; Meischke 1988a, pp. 184-85; Ozinga 1962, pp. 29-30; Miedema 1980; Van den Heuvel 1991, pp. 46-48; Kuyper 1994, pp.305-311; Van Wezel 1999, pp. 156-61; Schneider 2000; Ottenheim 2003; Gerritsen 2006, pp. 17-21; De Jonge 2007, pp. 48-49; Martens 2009, pp. 106-8; Lombaerde 2009, pp. 121-23; Hurx 2009; Van Tussenbroek 2013, pp. 51-52; Hurx 2018, pp. 42-47.

⁴⁶ Van der Borch and Van Noort had previously collaborated as business partners on several commissions. In 1537, for example, they had been documented to present a *'patroen'* for the elevation of the church of Our-Lady in Zwolle. De Vries 1993, p. 73.

⁴⁷ The archival statements of Reyner Lambrechts were published in: Nanninga Uitterdijk 1907.

⁴⁸ For Lammekens, see Duverger 1964; De Jonge 2007, p. 49; Hurx 2018, pp. 40-41.

⁴⁹ Although Lammekens and the sculptor Rombout de Drijvere admitted that the design and execution of wooden templates (*berderen*) belonged exclusively to the masons' guild, the carpenter Peter Theels declared that he had previously made these templates without having to contribute to the guild. Muller Fz. 1881-82, p. 233.

⁵⁰ On Vincidor's role in the palace of Breda, see Van Wezel 1999.

⁵¹ *'dat meester Thomas Bologne Italiaen, egbeen steenhondere oft cleynstekere maer een schilder wesende, heft geordineert bet huys tot Breda'*. Muller Fz. 1881-82, p. 232.

despite being neither stonemason nor sculptor had been responsible for the designs of the Ghent fortress of and the fortified walls and bastions of Antwerp".⁵² In addition, a goldsmith and a silversmith were named designing architecture: Jan van Nijmegen and a certain "Meester Alexander, goldsmith in this city [i.e. Antwerp] and who designed the castle of Buren".⁵³ It is unclear whether the latter is to be identified as the Italian architect or engineer Alessandro Pasqualini (1493-1559).⁵⁴ Unlike Vincidor or de' Boni his Italian origins are not specifically stressed, and he is specifically referred to as an Antwerp goldsmith. Therefore, the renowned Antwerp goldsmith Alexander de Bruchsal has also been considered as a plausible candidate (also see chapter 7.2).⁵⁵ Peter Frans, Antwerp's city architect specifically summarizes these statements by stating that "even though the art of making plans and drawings (*orinancien ende patronen*) for all kinds of building such as fortresses, castles, churches, city walls, houses, bastions or fortifications etc. is an essential requisite for stone carvers and sculptors to execute their craft; to design these plans has always been allowed by other artists (*consteneers*) such as painters, goldsmiths, and carpenters, who had not been forced to pay their duties to the said guild".⁵⁶ Interestingly, to strengthen the case of Van Noort, Cornelis Grapheus, the humanist and Antwerp city secretary who was responsible to record the court proceedings, added paraphrases from Vitruvius and Alberti focussing on the independence of the architectural designer.⁵⁷ In paraphrasing Vitruvius as an antique authority on the matter, Grapheus stated: "It should be understood that Architectura does not belong to one particular art, but rather that painting, stonemasonry, sculpture, masonry, carpentry and such others are to be considered as separate elements or limbs of Architectura".⁵⁸

⁵² *Ende desgelijcx Meester Donaes Italiaen, oyck noch steenboudere noch cleynstekere wesende, heeft geordineerd ende de patroonen gemaect van tcasteel tot Gendt, gelijk hij oyck deser stadt mueren, vesten, wallen, bollewercken ende anders tot der selver stadt fortificatien dienende, geordineert heeft ende noch daghelicx ordinerende is'. Ibidem.*

⁵³ Jan van Nijmegen or Jan van Vlieden (c. 1450-1532) was a prosperous Antwerp goldsmith who enrolled as seal cutter and goldsmith (*zegelstecker ende goudsmid*) in the guild of St Luke in 1484. On several occasions he was dean of the guild. He was also working for the Habsburg court as a goldsmith and seal cutter. He also delivered designs for the St Walburga church in Antwerp. Van Rombouts & Van Lerijs 1864-79, p. 34; Van Cauwenberghs 1889, p. 26; Schlugleit 1969, p.34; Antwerp 1988, p. 61, no. 4; Antwerp 1993, p. 202, no. 54.

⁵⁴ On the identification of this Master Alexander, see Van Wezel 1999, pp. 121-122.

⁵⁵ Since this Alexander has been named together with the Antwerp silversmith Jan Van Nijmegen, the identification with Alexander de Bruchsal becomes more likely.

⁵⁶ *'dat de const van ordinantien ende patronen te makene tot alderley edificien van burghen, casteelen, kercken, sterckten van steden, blockhuysen, bollewercken, wallen etc. wel eensdeels aengaet den ambachte van steenbouwen ende cleynsteken, over midts dat men tvoerscr. ambacht sonder patroonen ende ordinancien, daer toe eerst gemaect zijnde, nyet doen en can; maer en is de voers. conste daeromme nyet subiect den voers. ambachte in sulcker vuegen, dat de consteneers int voers. Ambacht neyt wesende, als schildersn goutsmeden, tymmerlieden etc., van ouden tyden tot noch toe sulcke ordinnancien ende patroonen gemaect hebben ende daghelicx maken, sonder totten voers. ambachte gedwongen te wordene'. Muller Fz. 1881-82, p. 236.*

⁵⁷ Muller Fz. 1881-82, pp. 243-45.

⁵⁸ *'Is dan wel claerlick te verstaen, dat architectura onder geen partilaer conge begrepen en is, als weten onder scilderie, steenbouden, cleenstecken, metselen, tymmeren ofte diergelicken, mer dese syn alle mer deelen ende litmaten, onder die architectura begrepen'. Muller Fr. 1881-82, p. 245.*

The court case has been frequently interpreted as the ultimate statement of a novel and changing attitude in the architectural design practice, which encompasses the independence of the designer or the free-spirited artist in general, as opposed to the restrictive building master working on the lodge and tied to the guild obligations. To Meischke, the court case was exemplary for the increasing role of painters in the architectural design process.⁵⁹ Design was perceived as a free art, superior to the mere manual art.⁶⁰ Both the mentioning of at least two (and perhaps three) Italian artists and the quote of Vitruvius and Alberti has led many authors to the conclusion that this changing attitude could only have been instigated by new southern winds of change blowing into the Antwerp harbour.⁶¹ Only more recently has this this point of view been more nuanced.⁶² In order to contextualise the 1542 court case, it is useful to deconstruct the various elements brought forward and re-examine them (once again), as it offers a good framework to introduce and explore both the novel and traditional aspects to the sixteenth-century design and building practice.

1.2. Italian expertise as influential voices?

Tomasso Vincidor, a pupil of Raphael, probably travelled to the workshop of tapestry weaver Pieter van Edingen, alias Van Aelst (ca. 1495 – 1560) in Brussels in 1520 to deliver the cartoons of the tapestry series the *Children Games and Medici symbols* designed by Giovanni da Udine and himself and commissioned by Pope Leo X.⁶³ In 1517 the tapestry workshop of Van Aelst had already received a commission from the pope for the prestigious series of the *Acts of the Apostles*, after the original cartoons of Raphael and probably also Giulio Romano.⁶⁴ By the time of Vincidor's arrival in Brussels at least seven out of the ten tapestries were finished and one year later the whole series was shipped to the Vatican. Vincidor also had to inspect the quality and report on the progress to Rome. Vincidor prolonged his stay in the Low Countries until at least 1535.⁶⁵ He remained active as an art agent for various other tapestry commissions by the Vatican during most of the 1520s and in 1530 he is documented working for Henry III of Nassau in Breda, where he was to design the new Renaissance palace, modelled after Antique, Spanish and Italian examples. Vincidor was most likely chosen as a designer because of his profound knowledge of the novel and fashionable Antique building manner.⁶⁶

⁵⁹ Meischke 1988a, p. 189.

⁶⁰ De Jonge 2007, p. 49.

⁶¹ De la Fontaine Verwey 1976; Miedema 1980; Meischke 1988; Van den Heuvel 1991; Kuyper 1994, p. 305-6; De Jonge 2007, p. 49; Martens 2009, p. 107.

⁶² Gerritsen 2006; Martens 2009; Hurx 2009; Hurx 2018.

⁶³ Dacos 1980b; Van Wezel 1999, esp. pp. 80-93; Roobaert 2004.

⁶⁴ Delmarcel 1999, pp. 90-93, 142-46.

⁶⁵ Dacos 1980b, p. 82; Van Wezel suspects that Vincidor may have returned to Italy during the second half of the 1520s where he may have been in Rome, Mantua, or Cremona, see Van Wezel 1999, pp. 89-90.

⁶⁶ Van Wezel 1999, p. 107.

Donato de'Boni's presence was instigated by Charles V, whose military engineers were to update fortifications, broad ramparts and novel bastions in response to the rapid and increasing improvements made in artillery and the many conflicts of the Emperor with France.⁶⁷ De' Boni was a student of the Venetian architect and urban planner Michele Sanmichele (1484-1559) and had already gained a reputation as a military engineer. In 1540 he designed the citadel of Ghent. In 1542, at the time of the court case, he was employed as an engineer for the new bastioned fortifications surrounding Antwerp and he was involved in the design of the new fortified town of Marienburg for Mary of Hungary in 1546.⁶⁸ He was also involved in smaller fortification projects such as the citadel of Rammekens in 1547 and bulwark of Vlissingen in 1548.⁶⁹

Alessandro Pasqualini (1493-1559) from Bologna is mostly known for his involvement in designing a new Antique-styled tower for the church of Ijselstijn and the castle of Buren, both commissioned by Floris van Egmond (1469-1539) in 1535.⁷⁰ Like his Italian compatriot de' Boni, Pasqualini was also paid to deliver drawings, wooden templates and designs for new fortification works of the cities of 's-Hertogenbosch, Kampen, Amsterdam and Middelburg during a revolt of the region against the emperor.⁷¹ After the death of Maximilian van Egmond (1509-1548) he moved to the court of William V the Wealthy (1516-1592) in Jülich where he designed the fortifications and citadel of the town.⁷²

In addition to the three Italian artists mentioned in the 1542 court case, several other Italian military engineers were employed in the Low Countries during the reign of Mary of Hungary such as Tomasso Boni, Ambrogio Precipiano, Giovanni Camerini or Giovanni Maia Olgiati.⁷³ Although the Italian military engineering implied an improvement for the development of fortifications in the Low Countries, their role as introducers of a new typology and military defence system claimed by previous authors has been strongly nuanced by recent research.⁷⁴ Local architects such as Marcelis, Rombout II and Laureys Keldermans, Domien de Waghmakere, Jacques Du Broeucq and Sebastiaan van Noyen had already shown great progress in adjusting their fortifications to new forms of artillery and the development of a fully grown bastion system in the Low Countries was rather the result of assimilation and a continuous dialogue between local and foreign expertise.

The suggestion that these Italian artists and military engineers imported a novel notion of architecture as a free art relies heavily on the idea that the Vitruvian or Albertian ideal of the

⁶⁷ Van den Heuvel 1991; Roosens 2000; Roosens 2005; Martens 2009.

⁶⁸ Van den Heuvel 1991, pp. 26-28, 92-93.

⁶⁹ Van den Heuvel 1991, p. 26.

⁷⁰ For Pasqualini, see Berg & Doose 1994; Van Wezel 1999, pp. 116-122, with further literature.

⁷¹ Van den Heuvel 1991, p. 27.

⁷² Metternich 1964.

⁷³ Van den Heuvel 1991, pp. 27-30; Roosens 1999; Martens 2009, pp. 60-1.

⁷⁴ Roosens 2005; Martens 2009.

intellectual and individually designing architect had become common practice on the other side of the Alps. Research on Italian building practices, however, indicates that the notion of the architect as someone whose occupation is solely devoted to the structural and aesthetic design of buildings was as non-existent in Italy as it was in the Low Countries and the rest of early modern Europe. As scholars of Italian Renaissance architecture have noted, there was nothing to withhold carpenters, goldsmiths, sculptors, or painters from designing architecture and take the responsibility of overseeing the building site.⁷⁵ This was not a novel feature of the new type of Renaissance all-rounder but can rather be considered as a continuation of older guild and craft practices. Although many artists, scholars, and patrons during the fifteenth century - such as Leon Battista Alberti, Antonio Filarete or Francesco di Giorgio - expressed their need for an individual profession which might align with our modern concept of the architect, it was not until the second half of the sixteenth century that this idea began to take shape in practice.⁷⁶ Prior to that, the most renowned Italian architectural designers (e.g. Brunelleschi, Michelozzo, Bramante, Peruzzi, Michelangelo, Raphael or Giulio Romano) had received their training either as goldsmiths, sculptors, carpenters or painters and were mostly members of the local guild if they were not under clerical or courtly employment.

Even if these Italian architects working in the Low Countries had been affected in their design practice by a novel Vitruvian ideal of the independent, intellectual designer, it is still a question to what extent these ideas may have spread to local architectural designers and whether this resulted in conflicts with the existing guild corporations. Their professional independence was strictly connected to their personal working conditions. All were employed in a relatively isolated courtly environment, either by the Emperor himself or by a member of the Burgundian-Habsburg court such as Henry III or Floris van Egmond. This implies that they were able to function outside of the guild system, on which their perspective would have little to no influence. As also noted by Hurx, it was not unusual for local artists and architectural designers to avoid guild regulations when being employed by courts, or even in certain civic commissions.⁷⁷

If the Italian experts were not named in the 1542 court case for their role-changing approaches on how to define the architectural profession, why were they referred to in the first place? Firstly, even if their working and designing practice did not differ dramatically from that in the Low Countries, they brought with them a sense of authority when it came to their knowledge of the aesthetic design and

⁷⁵ Ettliger 1977; Goldthwaite 1980, pp. 356-67; Hollingsworth 1984; Ackerman 1991, pp. 361-85; Trachtenberg 2010, p. 106; Merrill 2013; Huppert 2015; Merrill 2017.

⁷⁶ Andrea Palladio conceived his 1570 treatise *The Four Books on Architecture* as guides for those “who study the profession of architecture”, on no longer in more broad professional terms such as “to all lovers of art”. Equally Benvenuto Cellini and Giorgio Vasari made a critical professional distinction between painting, sculpture, and architecture, which would feed our present categorial framework. Merrill 2017, pp. 13-14.

⁷⁷ Hurx 2018, pp. 47-51.

Antique orders. It is no coincidence that a patron such as Henry III of Nassau, who was known for his interest in architectural theory and ownership of early printed and illustrated editions of Vitruvius, sought the advice and guidance of a student of Raphael when rebuilding the palace in Breda in the most fashionable state possible.⁷⁸ The presence of these Italians must have sparked quite some interest by artists and patrons alike who were attempting to understand, construct and assimilate the Antique style.⁷⁹

Secondly, the reference in the court case to these specific artists may also have been matter of personal acquaintance. At the time of the court hearing, Peter Frans, in his function of official city mason, was collaborating with Donato de' Boni on the new fortified walls of Antwerp.⁸⁰ Since Frans was in frequent contact with the Italian military engineer, it would make sense that he referred to him. Willem van Noort and Donato de' Boni were both strongly involved in fortification works in the Low Countries. In 1536 Van Noort was commissioned by Antoine de Lalaing, count of Hoogstraten, for making measurements and designs of a new gate and for inspecting possible defects in the old city walls of Utrecht.⁸¹ This happened in the context of a modernisation project of the walls, bastions, and the building of the Vredenburg citadel. Van Noort remained the main architect of the Utrecht bastions site until his death in 1558. Shortly after his arrival in 1540, de' Boni visited the building site in Utrecht to inspect the works.⁸² Between 1545 and 1551 Van Noort would collaborate more intensively with De' Boni as both masters were involved in the design of the "Morning Star", i.e. one of the Utrecht bastions.⁸³ Interestingly, in 1546 Alesandro Pasqualini was also documented as being in Utrecht, possibly to inspect the works at the fortifications.⁸⁴ Finally, the Antwerp master mason Phillip Lammekens is also mentioned in the building instructions of Henry III for one of the wings of his new castle in Breda. Again, since both Lammekens and Vincidor were involved in the same project it is not unusual for the Bolognese artist to have been mentioned as a reference during the lawsuit.

⁷⁸ On Hendrik III van Nassau and his architectural interest, see Van Wezel 1999, pp There is a parallel to the ways in which Gossart referred to Vitruvius and Bramante (Raphael's uncle), when employed by Philip of Burgundy, that other courtly expert of antique architectural theory. After his patron's death in 1529, Gossart was employed at the court of Henry III. Also see chapter 5.2.

⁷⁹ During festivities in 1544 and again in 1546, Donato De' Boni (who was described as "meyster Donathaien architeck") was offered some barrels of wine as a present from the city council, together with some members of nobility and court officials. Martens 2009, p. 114, 117.

⁸⁰ On Peter Frans, see Lombaerde 2009; Michielsens 2011.

⁸¹ *Willem van Noort, steenhouwer, betaelt die somme van veertigh ponden (...) voir ordinnan(tie) van mijn gen(erale) here die grave van Hoichstraten (...) myt saicke by diversche diensten gedaen heeft deser stadt van Utrecht int visiteren die gebreken vande metselrie omme der stadt wesende, oick int meten die borchwallen en int opnemen die wercken den huyslyyden toegevoucht te graven inde stadt grachten en int offsteecken die borchwalle, oick mede voir tmaicken van diversche patronen dienend tot een nyenwe poirte te maicken aen Tollesteech'.* Martens 2009, p. 98.

⁸² Martens 2009, p. 105.

⁸³ Martens 2009, pp. 112-16. Martens suggests the involvement of de' Boni in the design and execution of the Utrecht town hall between 1546 and 1548. However, only payments to Van Noort have been documented for this project.

⁸⁴ Bers & Doose 1994, p. 197.

1.3. Alberti and Vitruvius in the Low Countries: a matter of network and readership

The use of two authoritative voices on architectural theory both from antiquity and Italy has equally led to the interpretation of the 1542 court case as symbolic for the changing attitude towards architectural practice. Both Vitruvius and Alberti stress the fundamental distinction between design and execution, and its reference here is often seen as the advent of a novel way of theoretical thinking about architecture as a noble art in the daily building practice.⁸⁵ As noted by Kuyper, the fact that the passage on Alberti can be regarded as the first (modest) translation of Alberti in Dutch is in itself a significant milestone.⁸⁶ However, the quotation of Vitruvius and Alberti probably tells us more about the intellectual and humanist background of the writer of the court proceedings, Cornelis Grapheus (1482-1558), rather than it being the supposed reflexion of the humanist character of Willem van Noort and his personal position on the independence of the architect.⁸⁷ After traveling to Italy, Grapheus quickly became one of the most prominent neo-Latin authors in Antwerp who first gained fame in 1527 with his *De florentissimae civitatis Antverpiensis*, a collection of laudatory poems on the economic growth of the city.⁸⁸ Grapheus was very familiar with both Vitruvius and Alberti. He had written the introduction to Pieter Coecke van Aelst's 1539 Dutch Serlio translation and had previously quoted Alberti when writing the introduction to the 1528 Antwerp edition of Pomponius Gauricus' *De Sculptura*, published by Cornelis' brother Jan Grapheus (active 1527-1569).⁸⁹ Grapheus is known to have been a driving force behind the dissemination of humanist architectural theory for the Antwerp intellectual milieu. It has been suggested by Krista De Jonge that it was Grapheus who introduced Pieter Coecke van Aelst to the writings of Vitruvius, which led to an intense collaboration between humanist and painter.⁹⁰ Unquestionably Grapheus belonged to the intellectual and humanist elite in Antwerp, following in the footsteps of his predecessor as Antwerp's city secretary Pieter Gilles, whose personal humanist friendships included Erasmus and Thomas More. As a humanist Grapheus was also famed for making epistolary poetry for epitaph monuments, since "he knew the Antique manners of the Romans as no others".⁹¹ Other library collections which included early editions of Vitruvius - such as the Latin edition by Fra Giocondo (Venice, 1511), Diego de Sagredo's *Medidas del Romano* (Toledo,

⁸⁵ De Jonge 2007, p. 26.

⁸⁶ Kuyper 1994, p. 305.

⁸⁷ Kuyper 1994, p. 309; De Jonge 2007.

⁸⁸ Nauwelaerts 1986; Antwerp 1993, p. 178-80, no. 30.

⁸⁹ De Jonge 2007, pp. 26, 48; De Jonge 2017b.

⁹⁰ De Jonge 1998; De Jonge 2007, p. 48.

⁹¹ The quote occurs in the correspondence held in the year 1553-1554, between Cornelis Floris and Joos Facuez, secretary to the Chancellor, concerning the Merode Tomb in Geel: 'Cornelis Grapheus die daghelyxs anders niet en doet dan epitafiums te ordineren, hij weet die antiexze manieren van de Romajnen, hij maeckt zijn werck daer af'. Cosemans 1935, p. 260, doc. 11; De Jonge 2007, p. 48. Rather than being a reference to Grapheus knowledge of antique ornament or architecture, 'the Roman manner' in the passage probably refers to his handling of humanist rhetorical Latin in the style of Cicero or Seneca.

1527) or the later Italian edition by Cesare Cesariano (Como, 1521) - indicate that the treatise mostly circulated in the upper regions of the Habsburg nobility such as Henry III of Nassau and Philip of Burgundy.⁹²

Yet it was only by the second half of the century that we encounter references to Vitruvian architectural theory were being made in documents related to building and design practices. While in 1530 the stylistic request in the building contract for the newly (re)built castle in Diest was merely referred to as “up zijn antiecs” (in the Antique manner), a commission in 1564 by the wardens of the Leuven Abbey church of St Gertrude stipulated that the sculptor of the new sacrament house, Lambrecht van de Leliebloeme, was to follow the “proportions, measurements and designs according to the book of Vitruvius”.⁹³ A building contract for the White Gate in Leiden, dated 1591, specified that the design should be made “according to the manner of the Doric column”.⁹⁴ When a new wing was added to the Ghent town hall in 1614, it was requested that the capitals should be carved according to the “Corinthian manner”.⁹⁵ From the seventeenth century onwards such references to the orders became more common.⁹⁶ In the 16th-century guild ordinances of masons, stonecutters or carpenters these references to classical orders are absent and do not seem to have been any qualification to obtain the status of free master.⁹⁷ The regulations concerning masterworks presented before the deans of masons’ guild of Antwerp make no other mention to orders or Vitruvian principles until the masters’ test of 1674, when it is stated that the aspiring masons and stonecutters should be able to make “a column, its base and a capital according to the five orders (*gedeelten*) of Architecture, being the Tuscana, Dorica, Ionica, Corinthia and Composita”.⁹⁸ At the end of the sixteenth century the manuscript treatise *De Architectura* by the Bruges master mason Charles de Beste, written between 1596 and 1600, shows a great familiarity with both Vitruvius and Alberti and is perhaps the earliest unambiguous indication that this theory was introduced in a more daily craft practice.⁹⁹ Although a selected social layer of early modern Netherlandish society certainly was acquainted with the

⁹² De Jonge 1998; De Jonge 2007, p. 27. For Henry III of Nassau and Vitruvius, see Van Wezel 1999, pp. 87-88, 176; Kavalier 1995, p. 31. For Philip of Burgundy and Vitruvius, see Chapter 5.2.

⁹³ ‘(...) en sullen moeten geproportioneeret zyn nae huere lingde ende huere ordinancie ende mate vanden boeck vitruvius’. Crab 1977, p. doc. 10. Later in the contract the request is made to design one of the levers of the sacrament house in the composite order according to Vitruvius.

⁹⁴ For the Diest contract, see Van Wezel 1999, p. 78; For the Leiden contract, see Van Tussenbroek 2013, p. 114.

⁹⁵ ‘capitelen van correntia’, Van Tyghem 1978, doc. 430.

⁹⁶ For more examples, see Van Tussenbroek 2013, pp. 115-16.

⁹⁷ Only in the exam regulation for masterworks of the Antwerp carpenters of 1543 we find the obscure mentioning that one should be able to make a crossbar frame for a window with two columns at the outer cornice. Although one might be able to interpret this as a classical pilaster, there is nothing which specifies the outlook of these columns. ‘Inden eersten een cruysvenstere met twee colommen buyten geluyt’. SAA, GA 4341. Also see De Vries 2009, p. 42.

⁹⁸ ‘den gene die sal pretenderen te worden steenbouwer dat die sal moeten maeken eene colomme met sijn basement ende capiteel naer de vijf gedeelten van de Architecture, te weten Toscana, Dorica, Ionica, Corinthia ende Composita’. SAA, Ambachten 4267, 1674, fols. 56v-57r. Tijs 1985, pp. 16-17.

⁹⁹ Van den Heuvel 1994; Van den Heuvel 1995.

architectural theory present in the works of Vitruvius and perhaps even Alberti, the effects of this on the daily design practice of craftsmen and artists during the first half of the century should not be exaggerated. As interesting as this early reference in the 1542 court case to these authors may be, one should refrain from reading too much meaning into it.

1.4. Guild restrictions and Design responsibility

In the 1542 court case it was claimed by van Noort that the design of architecture could occur outside the restrictions or regulations of the masons' and carpenters' guild. This statement has been perceived as a declaration of independence from the old guild system and as a sign of a new way of thinking about the architectural profession. The essence of the court case, however, was not the separation between design and execution nor the liberal status of the artist, but rather a dispute about rightful payment between two disgruntled (former) colleagues. The main matter simply concerns whether design was restricted to masters who were members of the stonemason's guild or if others could also submit them. Van der Borch never had the intention of breaking with the corporate guild traditions but can only be interpreted as an attempt by him to claim his colleagues' financial share in a commission. More than one witness called by Van Noort stated that it had been a long-standing tradition that one need not be a member of stonemason's guild in order to deliver a design. The Antwerp mason, stone carver and sculptor Rombout van den Loocke, for example, stated in his testimony that no work could have been made without a drawing made with compass and ruler but that they cannot be forced to join the guild, "which has been the custom over a long time, and which has daily been observed and practiced, both in this city as elsewhere, as is publicly known by all who are knowledgeable of these facts".¹⁰⁰

Since we should not take the arguments in the court case for granted, it is useful to see what is mentioned in the guild ordinances about the responsibility of design. An analysis of the guild statutes and ordinances may offer some clarification on what was expected from and allowed by members of the guild.¹⁰¹ Most guild ordinances regulated practical concerns such as membership payments, obliged citizenship (*poorterschap*), entrance for children of masters, time of apprenticeship, working hours, accepting foreign commissions (i.e., outside the city walls), etc. Concerning the craft itself, regulations mostly focussed on the execution and the material aspect. This quality check of its members was also maintained by the requirements stipulated by the master work which an apprentice should be able to execute after his time of apprenticeship (mostly three to four years), before becoming a master in his craft. The mason's guild ordinances of Mechelen state in 1539 that in order

¹⁰⁰ 'alsoo over langen tijt by ouder costuymen gedaen ende geobserveert is geweest, so oock noch daghelicx geobserveert ende gepractiseert wordt, so in dese stadt so elders, so oock iegelicken des eenich verstant hebbende kenlick ende openbaer is'. Muller Fr. 1881-82, p. 239.

¹⁰¹ A good analysis of the master exams was conducted by De Vries 2009. This was restricted to the northern cities.

to become a free master, the apprentice was expected “to make the doorposts, with its lintel”.¹⁰² Subsequently the aspiring master mason was “to make a crenelated roof window with merlons and all that goes with it”.¹⁰³ The ability to draw or deliver a design was never mentioned. Other ordinances of guilds involved with architectural design, such as that of the Antwerp goldsmiths of 1524, remain just as brief about the drawing ability of the aspiring master. The apprentice is expected to deliver a chalice and a golden ring, executed after a design proposed by the deans.¹⁰⁴ Again, the focus is on the execution and correct handling of the material rather than design abilities. A rare exception where we see something of drawing abilities, is in an addendum to guild ordinances of the Antwerp mason’s guild, dated 1581, where it is requested that the candidate “should make a gable and a cellar staircase with his own hand, and the vaults of a door (or gate?) or cellar which he should draw with his own hand in the presence of the deans and aldermen of the guild”.¹⁰⁵ In the ordinances of the masons’ and stonecutters’ guild of Leuven in 1555 the aspiring apprentice was asked to “firstly, construct a model of a cellar staircase with a least twelve steps, either straight or winding for a quarter turn. Secondly, he should make a square roof window with merlons on top. Lastly, he shall make and carve a chimney piece consisting of two jambs”.¹⁰⁶ In Breda the apprentice was required to make a crossbar frame window, the roof truss and to draw a spiral staircase on a wooden board.¹⁰⁷ The designs for this exam were probably templates (*berderen*). It should not be a surprise that many of these masterpiece exams set out more or less the same requirements. In a notary attestation from 1615 it is mentioned that the deans of Mechelen requested information from the Antwerp mason’s guild on their election procedures and on their requirements for the masterpieces.¹⁰⁸ Sometimes the guild ordinances were composed by the central government, in agreement with all local customs and experience. For the ordinances of the goldsmiths working in the cities Brabant and Flanders a new ordinance was issued

¹⁰² ‘welcken proeve sal zijn te makene een hoof(de) van eenen deure met eenen egghe oft twee met zijnder toebehoirten’, SAM, Maçons 1, fol. 4r.

¹⁰³ ‘welcke proeve sal zijn, te makene een dackvenster gecanteelt met haren toebehoirten met noch alsulcken werken’. SAM, Maçons 1, fol. 4r.

¹⁰⁴ ‘Item dat degbene die voordane meester worden sal inde neeringe voorschreven sal moeten maken een stuck werx van grosserien ofte enen gulden rinck met eenen steene daer in oft yet anders daer af hy geconstumeert heeft geweest te werckene gelyc den Dekens ende gezworene van der Natie voors. Hem ordineren sullen te makene’. Schlugleit 1969, p. 42.

¹⁰⁵ ‘namentlijck te makene eenen gevele, eenen keldertrap met sijn eijghen hant, ende noch eenen teuge ofte welfsel van een porte, oft kelder die hij moeste met sijnen handt trecken int presentie van de dekens ende oudermans van de voorschr. Ambachte op des ambachts camere’. SAA, GA 4267, fol. 28-29v.

¹⁰⁶ ‘Voer dierste point dat hy sal moeten bedeylen ten minsten twelf trappen van een keldere recht opwerts oft een quartier drayende, tzy onder oft boven. Voer tweste point een dack venster viercant, ende die met hueren canteelen bedylt te woerdene. Voer derde point dat hy sal maken ende welven eenen hieert van twee punten, ende den selve loffelycken te werckene ghelyck dat behoort’. SAL, 1086, fol. 15v.; Crab 1977, doc. 2.

¹⁰⁷ ‘een tafel te betrecken een wyndeltrappe met drij doern in die gaen soe verde het op een bardisch is met zynene insneede ende schampeljoen dair af te maken’. De Vries 2009, p. 36; Van Tussenbroek 2013, p. 51.

¹⁰⁸ SAM, Maçons 6, fol. 1-6.

by Charles V in 1518.¹⁰⁹ In order to draw up the guild regulations, thirteen gold and silversmiths from all major cities were asked to come to Mechelen to advise and discuss these new ordinances, after which they were ratified locally.¹¹⁰ Although some guild ordinances specify the content of the masterpiece, the required drawing abilities – if they are mentioned at all - are reduced to strict basic skills such as drawing a stepped gable or a staircase. However, nothing points to any validity of the argument made by Van der Borch stating that only members of the mason's guild possessed drawing expertise.

Learning contracts are a second valuable source allowing a glimpse at the acquired skills during the three or four years of apprenticeship. At the offset of an apprenticeship, a contract was made between master and student in which the rights and obligations of both parties were specified. In his analysis of early modern Antwerp learning contracts Bert De Munck concluded that only one out of fifteen contracts mentioned that drawing would be taught.¹¹¹ Like the guild ordinances, these documents mostly relate to practical agreements and only occasionally to the ability to draw or to make models. Drawing was mentioned only twice in contracts of silversmiths.¹¹² In 1459-60 it was specified that new apprentices of wood carver Ledenaert Jan Hermanssone would be taught how to model and form (*bootseren ende formeren*) their works.¹¹³ Since drawing and sketching were essential requirements for any artistic craftsman to advance in his occupation beyond a certain basic level, it seems unlikely to conclude from this analysis that drawing was not part of the curriculum of gold and silversmiths, carpenters, cabinet makers, masons, sculptors and woodcarvers. In fact, it seems that a basic drawing skill was considered so self-evident in any artistic workshop, that it was not worth mentioning in contracts. We can get this impression from the following case. In 1524 Hanske de Vooght wanted to be accepted as an apprentice of the Antwerp goldsmith Jan Spaert, but his father had been unable to pay for the required enrolment fee.¹¹⁴ Even though Spaert and the boy's father wanted to come to an agreement in which Hanske was taken in as an apprentice if the father paid the fee at a later moment, the deans of the guild would not allow it. Hanske was to become a journeyman instead of an apprentice. Spaert was prohibited to teach him the craft but "could let the boy draw a little,

¹⁰⁹ Due to the valuable materials used and the repeated fraudulent use of other materials, the goldsmith ordinances were controlled by the central government at least since 1501, under Philip the Fair, when a central ordinance was issued based upon the older guild ordinance of Antwerp. Van Hemeldonck 1997, pp. 45-49; Schlugleit 1969, p. 38; Roobaert, p. 24.

¹¹⁰ Roobaert 2015, p. 25.

¹¹¹ De Munck 2007, pp. 56-58.

¹¹² De Munck 2007, p. 57.

¹¹³ Asaert 1972, pp. 59-60; Van der Stock 1993, p. 49.

¹¹⁴ Schlugleit 1969, pp. 73-74.

which he should be allowed to learn without having to enroll in the guild".¹¹⁵ The statement not only testifies that drawing skills were taken for granted, it also comes to show that drawing and design were not monopolized by any specific guild, nor was it regulated by guild ordinances. It affirms what was so eloquently said by Peter Theels in the 1542 court case: "Anyone who is right in their mind, should know that it is impossible to make any work concerning stonecutting or sculpting without first having made a drawing or a general design".¹¹⁶ The level of the acquired drafting skill depended mostly on each individual workshop and the individual ambition and aspired goals of each apprentice. The majority of the apprentices and journeymen active in workshops were required to be involved in the execution of the design and the production process rather the creative design itself. Since a large group of enrolled apprentices remained in the master's workshop and became associate journeymen, without ever aspiring to become a master, learning individual drawing skills beyond a certain basic level was not a priority for many apprentices.¹¹⁷ Yet those masters who aspired to receive the exclusive or prestigious commissions from patrons (e.g. church wardens, city aldermen, guild deans, urban upper class, the nobility or the court) were to be able to draw; and in order to receive the commission in an increasingly competitive artistic environment they were expected to draw well. Since drawings, sketches, wooden or paper templates (*berderen*), or scale models are often requested in the contracts between master and patron we can conclude that the skill was considered self-evident by stonecutters, masons, goldsmiths, wood carvers, etc.¹¹⁸

1.5. Division of crafts in Early Modern Netherlandish guilds

The character of and division between the various craftsmen over the medieval and early modern guild structures was not always very clear and often differed from city to city.¹¹⁹ Since certain individual crafts such as wood carvers or sculptors were often not socio-economically powerful enough in order to form their own guild, they joined other, more influential guilds.¹²⁰ Where masons and bricklayers

¹¹⁵ *'wat te laten conterfeyten, dwelck hy een yegelyck wel soude mogen leeren sonder int ambacht te comen'*. Schlugleit 1969, p. 74. Journeymen were not obliged to enrol in the guild and pay the accompanying fees. Also see Van Werveke 1943; Campbell 1981; Van der Stock 1993, p. 48; Martens & Peeters 2007.

¹¹⁶ *'overmis dien datmen, so iegelyck, die ennich verstant heeft, wel begrijpen ende verstaen can, egheen wreck den ambachte van steenboudene oft cleyNSTEKEN aengaende nyet gemaken en can, daer en zy eerst eenich patroon oft beworp daer af geordineert ende gemaect'*. Muller Fz. 1881-82, p. 233.

¹¹⁷ On the ratio between apprenticeship and master status, see Martens & Peeters 2006; Martens & Peeters 2007.

¹¹⁸ For the request for drawings and models in building contracts, see Van Tussenbroek 2013, pp. 50-54; Hurx 2015; Hurx 2018, pp. 241-312. For drawings in contracts of altarpieces, see Helmus 2010. For contracts and drawings of woodcarving, see Duverger, Onghena & Van Daalen 1953; Asaert 1972; Crab 1977; Jacobs 1998, pp. 210-19; Theunissen 2017, pp. 52-56.

¹¹⁹ The vague line between late Medieval design practices in the European urban context is also apparent from the range of applications present in the drawings of sketchbook by Villard de Honnecourt (ca. 1230). See Barnes 1982; Barnes 2009, with further literature.

¹²⁰ Crab 1977, p. 32.

mostly belonged to the mason's guild, under protection of their patron saints 'the four coronated', and painters most often could be found in the guild of St Luke, other craftsmen such as sculptors, wood carvers, ornament carvers, cabinet makers, the makers of retable boxes (*caisse*) either belonged to the guild of St Luke, the mason's guild or the guild of carpenters and joiners. In cities such as Mechelen or Antwerp, a further distinction was made between carpenters (*schrijnwerkers*) and joiners (*timmerlieden*). In Antwerp the 'wooden image carvers' (*beeldsnijders*) were to enrol in the guild of St Luke.¹²¹ This was also the case in Ghent, Bruges, Oudenaarde, Mons and Tournai.¹²² The Antwerp mason's guild also counted the woodcarvers among their ranks.¹²³ In Leuven and Brussels wood carvers were members of the mason's guild as well.¹²⁴ The new Antwerp guild ordinances of the guild of St Luke of 1458 were very explicit about the obligation of wood carvers of various kinds to join the guild: "those who wish to make sculptures (*beelden*) or architecture (*metselrien*) within this city, be it of wood or stone, are obliged to enrol".¹²⁵ Quite often this led to the enrolment of figurative wood sculptors into both guilds.¹²⁶ To complicate matters even more, the makers of retable cases were to be members of the carpenter's guild.¹²⁷ Sometimes when a group of craftsmen became more influential, they were able to separate and form their own guild with their own statutes. This occurred, for example, with the Antwerp gold- and silversmiths who separated from the Guild of St Luke in order to form their own guild of St Eloy in 1445 when they had become more financially powerful.¹²⁸ On other occasions we see a shift of a group of craftsmen from one guild to another, as happened in 1541 when the wood carvers of Mechelen left the mason's guild to join the guild of St Luke.¹²⁹ Despite having formed their own corporation in 1445, many Antwerp goldsmiths (including Alexander van Bruchsal and Jan van Nijmeghen) remained faithful members of the guild of St. Luke since many were working in a more figurative manner or etching; or they were members of the shopkeeper's guild (*meerseniers*) in order to be able to sell their products.¹³⁰ These professional and organisational shifts did not always occur fluently. Between 1539 and 1541, the Mechelen mason's guild tried every legal path in order to prevent the defecting sculptors from leaving their organisation.¹³¹ The fact that many craftsmen who required geometrical skills and design abilities were disseminated over various guilds facilitated the

¹²¹ Van der Straelen 1855; Campbell 1981; Van der Stock 1993; Peeters & Martens 2005, p. 75.

¹²² For Tournai, see Goovaerts 1896. For Bruges, see Parmentier 1948. For Ghent, see Dambruyne 2002, pp. 25-27; De Doncker 2007, p. 213-17. For an overview, also see Crab 1977, p. 47.

¹²³ SAA, GA, 4267.

¹²⁴ For Leuven, see Crab 1977, pp. 37-39; Leuven 1979; Cheyns 1979. For Brussels, see Duverger 1933; Duverger 1935; Crab 1977, pp. 56-59; Theunissen 2017, p. 57

¹²⁵ *Item soo wie van Beelden oft Metselerijen werckenwille binnen der Stadt bet zij van houte oft van Steenen, dat die int voorschr. Ambacht sal moeten comen*' SAA, GA, 4267, fol. 1r.; Van Cauwenberghs 1889, p. 6.

¹²⁶ See, for example, Duverger 2002.

¹²⁷ Van Damme 1987; Van Damme 1993.

¹²⁸ Schlugleit 1969, pp. 18-20; Van Hemeldonck 1988, p. 21.

¹²⁹ Neeffs 1887, pp. 10-11.

¹³⁰ Schlugleit 1969, p. 22; Van Hemeldonck 1988, n. 13.

¹³¹ Neeffs 1887, p. 11.

spread of technical knowledge throughout the urban structure but could also lead to guild conflicts such as the 1542 court case.

1.6. Context of professional guild conflicts

The elusiveness and sometimes overlap of certain skills and professional practices over more than one guild occasionally led to heated debates and court cases. A certain vagueness in the ordinances led to confusion on the duty to enrol in certain guilds. In 1480, for example, the officials of the Mechelen Guild of St Luke forced some glass painters to join their guild. The accused glass painters, however, argued that they had been enrolled in the masons' guild and were to be allowed to continue their work since the Mechelen mason's guild (*4 gekroonden*) also included glass makers (*gelaesmaekers*). Eventually the painter's guild lost the argument.¹³² Another such dispute occurred in the context of the design and construction of the choir stalls in the St Gertrude Abbey church of Leuven (1540-1543) where the Brussels woodcarver Mathieu de Waeyer was accused by the Leuven masons' guild of not having joined their guild despite his involvement in the Leuven project. That he came from a 'foreign' city did not help his case. He had, however, enrolled in the Leuven joiners' guild. Since the St Gertrude choir stalls were not merely individual carved wooden sculptures (*beelden*), but rather ornament (*cyrate*) and architectural carving (*metselrye*) the deans of the masons' guild admitted to de Waeyer that he was no longer obliged to enrol in their guild.¹³³ In a way, de Waeyer was able to win the case thanks to the vagueness and overlap in crafts within different guilds. As mentioned by Angela Glover in her discussion of the Leuven court case, it is interesting to notice that both guilds claimed the right on *metselrye*.¹³⁴ Although etymologically, this term may seem to belong to the masons' guild, many other crafts were responsible for this type of work, since it could range from actual stone architecture to architectural ornament in retables, choir stalls, golden chalices, ivory, alabaster sculpture or sacrament houses (also see introduction).¹³⁵ This reaches at the heart of the argumentation during the 1542 court case, where it was stated repeatedly that the mason's guild did not have a monopoly on architectural design.

¹³² Neeffs 1876, p. 10.

¹³³ Crab 1977, p. 185, doc. 12; Smeyers & Buyle 1991, pp. 42-43; Theunissen 2017, pp. 57-58; Glover 2017. A very similar case had occurred in Leuven in 1510, where the famous wood carver Jan Borreman was forced to join the mason's guild for working on a retable. On that occasion too, the artist had joined the joiner's guild and was supported in his argument by the joiner's guild officials who stated that for decades the Leuven joiners had been making wooden objects that included figural and architectural carving (*allerhande gesneden ende metselrieverck van houte als beelden*) in many places spread all over the city. See Crab 1977, doc. 11.

¹³⁴ Glover 2017, p. 108.

¹³⁵ On the dissemination of *metselrie* over various guilds, see Jacobs 1998, pp. 211-12.

These and many other comparable guild disputes allow us to see the 1542 court trial into a wider context and a continuity of common guild debates on responsibilities.¹³⁶ Such guild disputes and court cases focussed mostly on design and execution and the financial contributions (*keersgeld*) that craftsmen were obliged to make to a certain guild corporation. The complexities of the labour distribution in the urban corporate society of early modern cities created not only confusion but also led to aggrievances when someone got the impression that a certain master made abuse of the system by not paying his dues. Although the discussion during the 1542 court case focussed mainly on design responsibility, the main gain for Van den Borch was not winning an intellectual discussion on design but to receive his share in the (unknown) commission. Although references to Vitruvius, Alberti and Italian designers enriched the argument of Van Noort with a humanist authoritative touch, the main argument brought forward by Van Noort was one of continuity and tradition; often a persuasive argument in a local judicial system where custom law (*costumen*) still held great authority in the early modern society.¹³⁷ In his analysis of guild conflict settlements in Antwerp from the late sixteenth- to late eighteenth century Harald Deceulaer discusses other cases where theoretical or outside judicial experience could be cited as evidence in order to forward the case; he also concludes that the most common type of dispute was held between two different guilds.¹³⁸ Therefore, it may be incorrect to interpret the 1542 court case as a symbolic and interpretive key in order to pinpoint the first cracks appearing in the guild monopoly, but rather as a continuation of both guild and its members protecting and maintaining the market quality of the product, and on a more personal level to the financial claim to which they felt entitled to.

¹³⁶ For other guild court cases, see Deceulaer 1996, De Jonge 2007, p. 25.

¹³⁷ Gilissen & Gorlé 1991, pp. 18-126; Van Caenegem & Milis 1994; Van Caenegem 1996.

¹³⁸ Deceulaer 1996, pp. 171-202.

2. The Inheritance of Knowledge: daily drawing practice and the guilds

Now that we have been able to establish from the statutes and learning contracts that drawing was a common practice not regulated by the guilds, we shall turn to the actual drawing practice and the various applications of *metzelrye*. Building contracts and individual contracts for goldsmith-work, furniture, sculpture, and micro-architecture also confirm this image of a great variety of craftsmen who were responsible for design. Many of them mention drawings and designs which were to be executed by a craftsman.

2.1. Drawings in the northern-European building practice

According to the *Dictionarius* (c. 1272) of John of Garland, the very word *architectari* could be used synonymously to *pourtrere* (to draw).¹³⁹ Although the earliest physical evidence of gothic architectural drawing practice dates back to the early 13th century, there was a long tradition in which drawings on any medium were a key instrument for master masons to visualise and communicate their design concepts to patrons, masons, and a wider audience.¹⁴⁰ The lack of design drawings dating from before 1200, may tell us more about attitudes towards conservation, or the availability of parchment, rather than the actual drawing and designing practice.¹⁴¹ One of the earliest northern architectural drawings, the so-called Reims Palimpsests of the 1270s, depicting an elevation plans of the first level of Reims Cathedral, was preserved because the parchment was reused in a collection of obituaries in the Cathedral Chapter in Reims.¹⁴² This gives us a clue on the number of other drawings that might have suffered a similar fate once the document was no longer needed for practical purposes. From the thirteenth century onwards, many plans – especially of German and Austrian building lodges – were preserved in the offices of and chapters of the long-term building projects, which results in a large collection of fourteenth- and fifteenth century gothic architectural drawings. Well known examples are those of Strasbourg (c. 1360), Cologne (1250-1350), Trier (c. 1240), Prague (c. 1390), and Ulm

¹³⁹ Schöller 1989a, p. 227.

¹⁴⁰ This excludes the well-known ground-plan of the Abbey of Sankt-Gallen of c. 820, which is most likely not a strict design drawing, both rather an organisational sketch, post-construction. Horn & Born 1979; Jacobsen 1992. Earlier uses of architectural drawings are studied by Coulton 1985; Haselberger 1985; Ousterhout 1999, pp. 39-57; Addiss 2002.

¹⁴¹ In older literature on the subject, it has often been suggested that the practice of making architectural drawings was very rare to non-existent prior to this period and architects and masons would merely plot the proportions and dimensions of the edifice on the building site with stakes and cords. See, for example, Branner 1963; Schöller 1989a, pp.36-61.

¹⁴² Branner 1958; Murray 1978; Bork 2011b, pp. 42-5

(1477).¹⁴³ By far the largest collection today is that of the Vienna Akademie der Bildende Künste, which holds 428 gothic drawings, the majority related to the design process of the Vienna Stephansdom and its interior sculptural program.¹⁴⁴ These ground plans and elevations are often of considerably size, ranging from one meter to four meters. The draftsmen making these drawings are mostly identified with the master masons or sculptors in charge of the building site. From the thirteenth century onwards, the leading designers increasingly gained independence from one local building site and their knowledge of Euclidian geometry allowed them a more an improved social position as designers. The growing importance of drawing practice since the mid-thirteenth century created a novel situation in which the leading designers had become professional draftsmen, skilled with a Euclidian geometrical toolset. A frequently cited comment on this practice comes from the thirteenth-century Parisian Dominican preacher Nicolas de Biard, who complained that this new class of designers received more wages than the masons, despite them not doing any physical labour: '*The master masons, holding their rods and gloves in their hands, say to the others "Here's where to cut it for me", and yet they themselves do not work; nevertheless they receive the greater fees*'.¹⁴⁵ The passage is an indication of a novel social position of the master mason as an intellectual designer, who supervises rather than works on the building site. This separation of ideation from creation eventually resulted into a greater independence of the architect as designer by the turn of the century. The growing importance and technical complexity of architectural design, together with structural changes in the supply of building materials resulted in an increasing division between design and execution. Dynasties of master masons, such as the famous Parler or Keldermans families, were often active on more than one building site at a time and would travel between them to inspect the progress and if necessary, adjust the design.¹⁴⁶

¹⁴³ Many of these plans have recently been published in a critical facsimile edition by Johann Josef Böker: Böker 2005; Böker 2011; Böker 2013. For Trier, see Helten 1992.

¹⁴⁴ Böker 2005.

¹⁴⁵ Binding 1993, p. 238; Binski 2010, pp. 22-24; Bork 2011b, p. 53; Hurx 2012, p. 206; Hurx 2018, p. 36.

¹⁴⁶ Toker 1985; Kimpel 1986; Kimpel 1989; Klein 2010.

2.2. Drawings in the Netherlandish building practice

In his recent study on the development of the architectural profession in the Low Countries, Hurx devoted attention to typology, visualisation methods and stages of architectural design practice, by studying both building contracts and the physical drawings.¹⁴⁷ As the position of the architect changed during the course of the fifteenth-century from overseer and craftsman with a permanent presence on the lodge towards a role of a mobile contractor and intellectual designer, written building instructions and architectural drawings increasingly played a role in communicating design between designer and patron, between designer and the building site, and between designer, patron and the general audience. Although the first documented reference to architectural drawings dates from 1449, there is no reason to assume that thirteenth- and fourteenth-century architectural design practice in the Low Countries occurred and developed differently from the neighbouring regions.¹⁴⁸ A varied terminology was used to refer to drawings or designs in general. Although the most frequently used terms were *patroon* and *ordinantie*¹⁴⁹, also other terms such as *pourtraict*, *gront* (for ground plan), *visering*, *betreck*, *devise* and *beworp* have been used within the same semantic field.¹⁵⁰ The preserved drawings track every phase of the building process; they include preliminary sketches, working drawings of details, and ultimately full-scale presentation drawings.¹⁵¹

Many of the preserved drawings fall under the latter category, probably thanks to their aesthetic qualities and durable parchment support. These are often elevation drawings which depict the building project with a great amount of detail and ornament and primarily functioned as a mode of communication between the draughtsman and the patron. They were made to impress and to give a general idea of what the building would look like to a beholder who is uninitiated in complex geometry or arithmetic. Therefore, these drawings often lack scale, or measurements and often apply forms of perspective to visualise the project to its full potential. One well-documented set of presentation drawings are the two elevations for the Ghent town hall in 1518-19 (figs. 2.1 and 2.2).¹⁵²

¹⁴⁷ Hurx 2018, pp. 241-311.

¹⁴⁸ This is the 1449 building contract of Jan van Ruysbroeck, master of the works for the Brussels town hall, where it is stated that he is to trace (*betrecken*) the tower of the building and to deliver stonemasons' templates. Des Marez 1923; Hurx 2018, p. 241.

¹⁴⁹ The *ordinantie* or ordinance could also refer to written instructions and specifications.

¹⁵⁰ On the terminology, see Mosselvelde 1987, pp. 10-11; Meischke 1988a, pp. 132-37; Phillipp 1989; Van Tussenbroek 2013, pp. 50-51; Hurx 2018, pp. 142-43.

¹⁵¹ Hurx counts a total number of 31 documented architectural drawings preserved from before 1530. Hurx 2018, p. 244. This is, however, strongly dependant on the definition of architecture. When including micro-architecture, this number may rise. The Antwerp city archive alone list 48 sixteenth-century drawings, mostly ground plans and situational drawings made by local land surveyors.

¹⁵² Ghent, STAM, inv. 472 and 473; Van Tyghem 1978, pp. 101-9; Mosselvelde 1987, pp. 111-23; Meischke 1988a, pp. 141-42; Phillipp 1989, p. 71; Phillipp 1996; Hurx 2018, pp. 265.



Fig. 2.1. Rombout II Keldermans & Domien de Waghmakere, *Design for the façade of the Ghent town hall, Hoogpoort side*, 1518-19, pen and brown ink with brown wash on parchment, 86 x 146 cm. Ghent, Museum STAM, inv. 472. Photo: © STAM

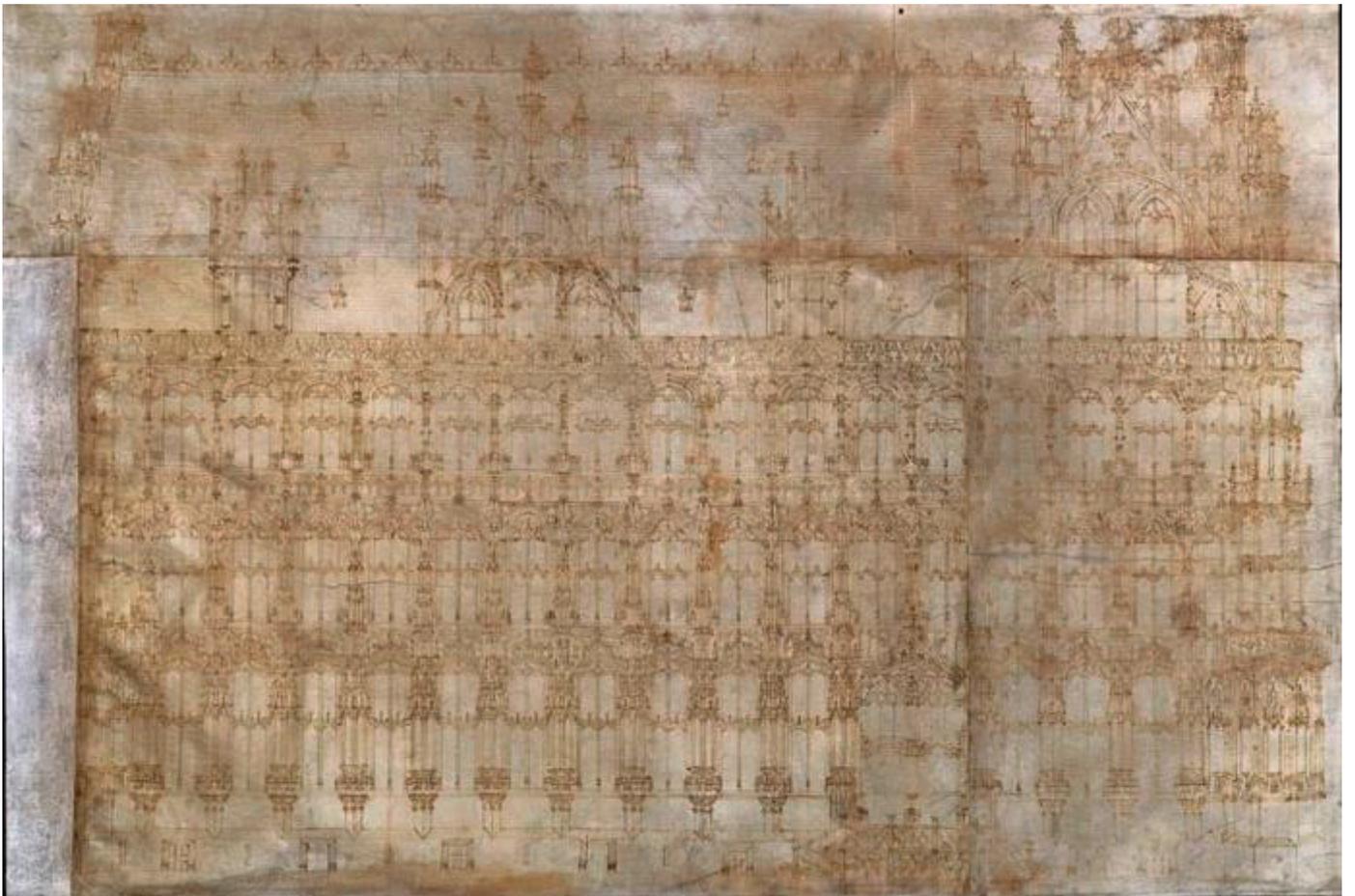


Fig. 2.2. Rombout II Keldermans & Domien de Waghmakere, *Design for the façade of the Ghent town hall, Botermarkt side*, 1518-19, pen and brown ink with brown wash on parchment, 83 x 123 cm. Ghent, Museum STAM, inv. 473. Photo: © STAM

After the sudden death of Jan Stassins, the former master of the works, the city officials, and a committee (composed of members of both the masons' and joiners' guild) commissioned two 'foreign' experts to deliver the new designs and drawings for the prestigious town hall.¹⁵³ They were Rombout II Keldermans and Domien de Wagemakere. In the building contract of January 1518, they were asked to deliver two drawings on parchment before Easter; one of the east side and the other of the west side façade of the newly to build town hall. It was also specifically stipulated that the drawings were to stay under their guardianship during their lifetime 'so that no other architects would be able to copy the design as long as they were alive'.¹⁵⁴ If the architects passed away, the drawings were to become the possession of the city magistrates. Both elevations show a painstakingly amount of detail and an array of ornament spread over all three levels of the edifice. Each individual window is filled in with the richest and the most fashionable tracery, executed with the greatest care.¹⁵⁵ The perspective used in the inventive projecting windows at the corner of the building slightly breaks with the orthogonal projection of the rest of the design. Certain parts of the drawings, such as the tracery and ornamental segments on the roof received a finishing touch by the addition of brown wash. The large amount of 100 lb. which was paid for these drawings may help to explain the care that went into making these designs, and why they were to be kept under the custody of their creators and later their patrons. Thanks to their great aesthetic and historical importance the town hall drawings were always cared for by the Ghent city magistrates. Comparison with a very similar commission allows us to understand the level of detail which went into the Ghent drawings. Despite the fear of the Ghent magistrates of their design inspiring others like it, the Mechelen magistrates and members of the Great Council (since 1474 the highest juridical institution of the Low Countries) commissioned Rombout II Keldermans to design their new prestigious building in 1525 (fig. 2.3).¹⁵⁶ The overall structure and typology of ornament shows a great similarity to the two Ghent drawings, be it with less detail and finishing. As was conventional in European drawing practice, repetitive elements such as recurrent ornaments in window tracery are left blank in the Mechelen drawing being drawn the first few times; the viewer is naturally expected to mentally repeat these ornaments.

¹⁵³ Van Tyghem 1978, vol. 1, p.101.

¹⁵⁴ *'te makenne ende vulmaect te togbenne onzen naercommers dwette eene patroen van onder tot boven, in parckamente oft franchine, van den voorn. Weercke van den scepenhuuse, also verre alst beede de zyden van den zelven scepenhuuse ancleest, te wetene de gheelle zyde oostwaert van den scepenhuuse tot an tstraetkin van den Gulden Poorte, ende de gheelle zyde noortwaert tot an tstraetkin van den Gulden Hoofde, hoe wel den zelven patroen zal bliven rustende onder eenich van den zelven weerclieden, alzo langbe als den lancstlevenden van hem beeden te liven bliven ende daertoe occuperen zal moghen, ten fyne dat gheen andere weerclieden binnen hueren levenne naer den selven patroen weercken en zouden'*. Van Tyghem 1978, vol. 2, doc. 27.

¹⁵⁵ On the ornamental language and fashionable motives such as Keldermans' idiosyncratic bell-shaped ornament, see Kavalier 2004; Kavalier 2012, pp. 72-6.

¹⁵⁶ Mechelen, Museum Hof van Busleyden, inv. 140. Meischke 1988, p. 142; Mosselveld 1987, pp. 123-27; Hurx 2018, pp. 258. Unfortunately, the Mechelen drawing has become practically illegible due to long over-exposure to UV-light.

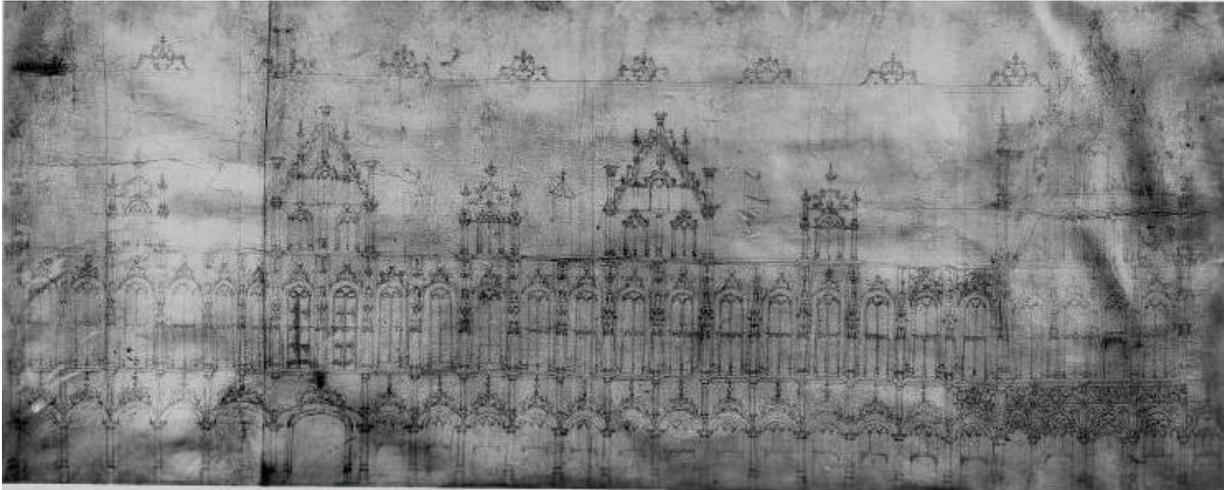


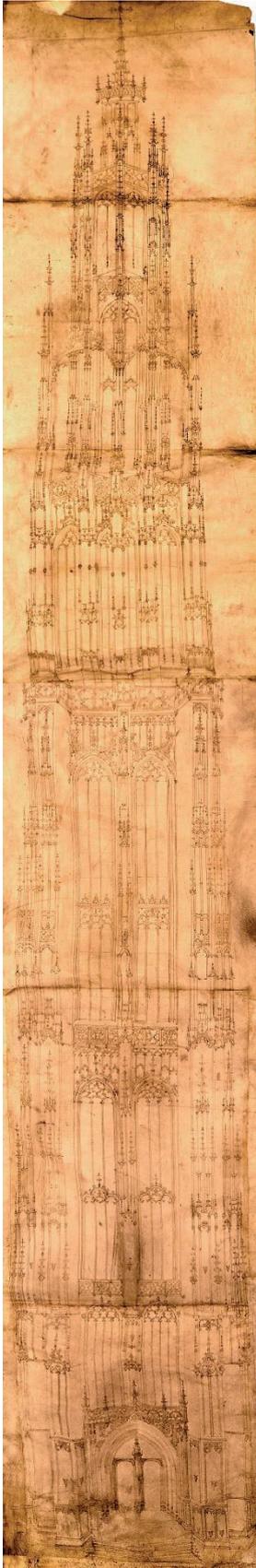
Fig. 2.3. Rombout II Keldermans, *Design for the façade of the Great Council of Mechelen*, 1525, pen and brown ink with brown wash on parchment, 50 x 107 cm. Mechelen, Museum Hof van Busleyden. Photo: © KIKIRPA

These elaborate and luxurious drawings show only a fraction of the number of drawings associated to the building process. In the accounts and ordinances concerning the Ghent building, several payments were made for other drawings which have not been preserved but must have been an integral part of the design process. Already before the involvement of the two renowned architectural designers, payments were made for the main hall of the town hall. In 1482 the stonecutter Wouter Buuc received a payment of 2 s. gr. “for writing instructions and making designs for the stone cutters in [the quarry of] Vliersle”.¹⁵⁷ In 1483-84 the stone mason Joos den Ottere was paid for delivering “all the stones, templates (*berderen*) and drawings of both chimney pieces” in the main hall.¹⁵⁸ Before agreeing to create the two discussed parchment drawings, Keldermans and de Waghmakere had already made a preliminary drawing or sketch in order to give the building committee a first idea of their concept. Additionally, they agreed to deliver the necessary paper templates for the stonecutters.

The communication of architectural design and the transfer of architectural knowledge occurred rather naturally between architects in the low countries as many of them were often called upon to inspect the ongoing works or the architectural drawings of their colleagues. This ‘*visiteren*’, as it was commonly referred to in documents was common practice and led not only to a stylistic uniformity but created a close-knit network of architectural designers in the Low Countries. Often existing architectural plans or projects were used as models to emulate upon. A frequent occurrence in building

¹⁵⁷ ‘*van int gheschryfte te stellene ende een beweerp te makene angaende den steenbauwers te Vliersle*’. Van Tyghem 1978, vol. 2, p. 112.

¹⁵⁸ ‘*alden steenen, berderen ende patroenen van beede de heerden*’. Pauwels 1952, pp. 7-8; Van Tyghem 1978, vol. 1, p. 90.



contracts are architectural designers who were sent to other cities to copy architectural drawings as documentation for their own building project.¹⁵⁹ The most famous example is perhaps that of the west spire of the St. Waudru in Mons. In 1547 the architects Jean Repu and Jean de Thuin were sent to Mechelen, Leuven and Antwerp to document the existing architectural drawings in order to combine the best features into a superior design. In Mechelen copies were made of the designs by Rombout II Keldemans for the tower of St. Rumbold. The result is the architectural drawing which is now still commonly referred to as the 'Plan Chalon', depicting an elevation of the finished spire (fig. 2.4).¹⁶⁰

We can assume that many smaller designs, sketches, and work drawings of a strictly practical nature were not executed on paper or parchment at all, but rather on writing and drawing tablets. The usage of small panels has been documented in daily practice by school children learning how to write, but they were also used on a daily basis by bankers or accountants in order to make quick calculations or notes.¹⁶¹ The tablet could either consist of a small wooden panel prepared with chalk, or just a piece of slate. Although he relates to the painter's workshop practice, Cennino Cennini describes the preparation of such boxwood drawing tablets in his *Libro dell'Arte* as the best manner of practicing one's draughtsmanship, before he discusses drawing on

Fig. 2.4. Jean de Thuin, Jean Repu and Guillaume Le Prince, *design for the tower of St.-Waudru* (plan Chalon), 1550, pen and brown ink on parchment, 345 x 65 cm. Mons, AEM. Photo: © Merlijn Hurx.

¹⁵⁹ For more examples, see Hurx 2018, pp. 248-50.

¹⁶⁰ The name refers to the historian R. Chalon who had rediscovered the drawing and published it in 1844. Chalon 1844; Devillers 1854; Van Caster 1899; Van Langendonck 1987, pp. 41-42; Hurx 2018, p. 248.

¹⁶¹ Willemsen 2008, pp. 57-60.

paper or parchment.¹⁶² Particularly in the context of building sites and lodges, where slates would have been readily available, and since slate layers and roof workers were often members of the masons' guild, the most practical ad hoc drawings were either made on perishable media or quickly drawn on walls of the building site itself. Well-known examples are found in the ambulatories or pavements of the cathedrals of Clérmont-Férrand, Narbonne, Soissons and Limoges.¹⁶³ These mural and floor drawings consist of select components such as portal arches, pier plans, or tracery patterns. Robert Branner argued that the gothic drawing practice originally arose in this context and as architectural structure grew more complex, these designs were being transported from stone to parchment around 1200.¹⁶⁴ It is more likely that both practices, drawing on perishable media and drawing on parchment (or paper from the mid-fifteenth century), have always co-existed with a different function and audience in mind. A rare example of this practice can be found in the church of Our Lady in 's-Hertogenbosch where a finial is drawn in black chalk on one of the chapel walls in the northern nave (fig. 2.5).¹⁶⁵ The design on a 1:1 scale was most likely used by a mason, blacksmith or brass smith responsible for the construction of the spire pinnacle to communicate his design.

Many architectural drawings were made by local land surveyors who also operated as master mason of a city.¹⁶⁶ References to land surveyors appear as early as the 13th century; they were involved measuring and inspecting land for building projects.¹⁶⁷ They played a crucial role not only in building preparations, but were of great importance in judicial disputes when questions were raised in land



Fig. 2.5. Anonymous, *design for a finial*, ca. 1480, black chalk. 's-Hertogenbosch, Onze-lieve-Vrouwekerk. Photo: © Author.

¹⁶² Cennini 2015, pp. 27-29.

¹⁶³ Bucher 1977; Claval 1988; Schöller 1989a; Schöller 1989b, p. 228; Davis 2002; Coldstream 2002, pp. 77-78

¹⁶⁴ Branner 1963.

¹⁶⁵ Van Wezel 2005, p. 85.

¹⁶⁶ Viaene 1966, p. 8.

¹⁶⁷ The earliest mentioning of an *agrimessore* is in Bruges in 1297-98. Viaene 1966, p. 6; Brussels 1976, pp. xiv-xv; Van de Vijver 2006, p. 3171.

ownership, border quarrels or building violations which makes the function closely related to both courtly and civic power. Already in 1462, for instance, a certain '*Gheert de Lantmetere, scildere*' is commissioned to measure and make a drawing of some streets of Brussels in the context of a legal dispute.¹⁶⁸ In the Low Countries with their continuous battle against the North Sea, the tasks of land surveyor often also included hydraulic engineering (see chapter 4). Even master masons with great social standing, such as Loys van Boghem, worked as the official land surveyor of the duchy of Brabant between 1507 and 1525.¹⁶⁹ In contracts or city accounts they are mostly referred to as *geometer*, *lantmeetere*, *cosmograef*, *paelder* or *ghesworen erfscheyder*. These terms were strongly interchangeable, and their distinction is rather vague or even non-existent. This amalgamation between the function of master of the works, sculptor, city planner and land surveyor would remain standard practice during the sixteenth century. Contract references between 1566 and 1589 to the Amsterdam artist Joost Janz. Bilhamer (1521-1590), alternate between the terms wood carver (*beeldsnijder*), sculptor (*steenhouwer*), land-surveyor or architect.¹⁷⁰ Drawings made for land-surveying campaigns were usually strictly functional and were limited to the most practical basic elements. With their use of architectural drawing techniques and geometrical knowledge, these land-surveyors were able to make measurable ground plans which included scales, orientation, and practical instructions. One example is a situation sketch in Antwerp, made around 1570 (fig. 2.6).¹⁷¹ The map represents the area in Antwerp around Klapdorp and the Paardenmarkt with a mention of the width of the streets in Antwerp feet. An interesting indication for the transdisciplinary function of the land-surveyor is the fact that the document is signed by Willem van den Broecke (1530-1580), better known as Guillemus Paludanus, one of the most renowned sculptors in the city and whose esteem at the time was only overshadowed by Cornelis Floris.¹⁷² These drawings were a bridge between conventional architectural drawing practice and the early rise of professional cartography in the Low Countries, as will be further discussed in chapter 4. Quite often the drawings were made in the context of juridical disputes of ownership, reconstruction works or city planning.

¹⁶⁸ Pinchart 1860-82, vol. II, p. 156; Büttner 2000, p. 78; Bakker 2004, p. 172.

¹⁶⁹ Hörsch 1994, p. 212; Hurx 2018, p. 210.

¹⁷⁰ Staring 1964, pp. 201-02; Van Tussenbroek 2007.

¹⁷¹ SAA, ICO12#4759.

¹⁷² Duverger & Onghena 1938; Duverger & Onghena 1942; Nieuwdorp & Remoortere 1982.

2.2.1. Redesigning the house of the English nation: a case-study in urban design practice

An interesting set of anonymous drawings made in the context of land-surveying responsibilities of official city master masons are the set of ten drawings related to the rebuilding of the houses of the English nation in Antwerp. In 1474, in order to attract the English traders from Bruges to Antwerp, the city had offered the English traders a new building for their nation house.¹⁷³ It was located in the commercial heart of the city, opposite the new stock exchange and next to the first trade house of the German nation.¹⁷⁴ As the activities and political importance of the English merchants and traders expanded, other neighbouring buildings were added until it covered almost the entire housing block located between the present Doornikstraat and the Hofstraat.¹⁷⁵ The building offered room for the administration as well as to stock and sell the goods (mostly English wool) in small shop stalls. In 1553 - probably as a long-term result of the fact that the stock exchange had moved to a new more central location at the Meir in 1531 - a new even more prestigious building was established as the new location of the English merchant nation at the *Hof van Liere*, named after its former owner Arnold van Liere, burgomaster of Antwerp.¹⁷⁶ Although the building was still owned by the city, the English nation enjoyed the usufruct of the property for as long as they remained in the city.¹⁷⁷ In October 1558, the Hof van Liere was made the official and only centre of the English nation. Already in 1553, the old nation building was being refurbished for new purposes, the building was to be resold as three individual houses and two new streets (Grote and Kleine Koraalberg) were being drawn within the old housing block.¹⁷⁸

For this building campaign several ground plans were drawn by the local land-surveyor. Although none of the drawings are signed, they can be attributed to the master mason of Antwerp, Peter Frans. An inventory composed in 1584 by Frans' successor, Adriaen Bos, which enumerates all of Frans' commissions mentions "a bundle of drawings of the English house", which almost certainly refers to our set of drawings.¹⁷⁹ All drawings contain written information on the situation at hand. A drawing

¹⁷³ 'een huysinghe met plaetsen, hove, broneputte, gronde ende toebehoirten', SAA, Privilegenboek, fol. 234r. On the English merchants in Antwerp, see De Smedt 1954.

¹⁷⁴ Although the first official stock exchange building would be constructed by Domien De Waghmakere on this location in 1515, the house was already being used as a gathering place for merchants since 1452, see Denucé 1932, p. 82; Braeken, Goosens & Plomteux 2018, <https://id.erfgoed.net/teksten/298038> (consulted 7/5/2019). On the building typology of stock exchanges, see De Jonge 2010d.

¹⁷⁵ On the construction history, see De Smedt 1954, pp. 128-34; Hendrickx 1997.

¹⁷⁶ De Smedt 1954, p. 134; Brouwers 1975, pp. 7-15.

¹⁷⁷ SAA, Schepenbrieven, 1553, fol. 253.

¹⁷⁸ Hendrickx 1997, p. 13.

¹⁷⁹ 'een bussel patteronen vanden Engelsen pant'. SAA, PK#2228, fol. 26. For a full transcription of the document, see Michielsen 2011, pp. 10-16. She mistakenly interpreted the phrase as a reference to the Hof van Liere, rather than the old nation house.

showing the situation of the south side (fig. 2.7) contains captions describing the ownership of the various parts of the housing block. The section at the upper part of the drawing is indicated as belonging to the house of Calais and could not be sold together with the former house of the English nation.¹⁸⁰ The text indicates that he who should purchase this empty store would also be the owner of “the House of Calais”.¹⁸¹ An inscription at the bottom of the page reads that it concerns the house named the Pelican.¹⁸² A second drawing from the same “bundle of drawings” is almost an identical plan, but now with green colourings to mark the property belonging to Calais (fig. 2.8).

This set of drawings also provides a wide range of information about architectural drawing conventions and practices. Full walls are indicated with a red line. More ephemeral structures, such as doors and window openings are drawn in black ink.¹⁸³ The square shop stands used by the English merchants are also drawn in black ink, which indicates that they were wooden structures placed between columns with arches, not unlike the way meat stalls were organised in the nearby meat hall, constructed by Herman and Domien de Waghemakere. Dotted lines indicate planned building projects, such as the placement of walls to make smaller compartments. Some of the ground plans include a scale line in Antwerp feet, starting with intervals of 1 to 10 and then going over into intervals of 10, ending at 90 feet in total.¹⁸⁴ On other drawings, specific measurements of rooms or structures are stipulated. Peter Frans clearly made several drawings of different stages in the building process to follow up either the property sale or the significant structural alterations necessary for the creation of the new streets. Two drawings of the middle section of the building plot illustrate this creative design process. One ground plan presents the results of a thorough surveying campaign by representing the actual situation (fig. 2.9), with thick red lines for the actual building situation, which included a pentagonal staircase tower. In a second drawing (fig. 2.10) of the same building section, some of the red line from the former drawing have now been replaced by a double black line superimposed upon the new situation with now red lines where a new street (Grote Koraalberg) now spits the building plot in two parts.

¹⁸⁰ This was most likely due to changes on the geo-political map. In 1558, during the wars between Habsburg and France, Henry II of France had conquered Calais from the English, which had remained an English enclave since the Hundred Years War. The sale of the property coincided with the Treaty of Cateau-Cambrésis (1559), which ratified this conquest. This may have implied that a section of the house of the English nation had become the property of the merchants of Calais.

¹⁸¹ *‘Dit perveel mach vercoepen den gene die did leeghen winckel toebehoirt. Welcken winckel het huys van Calais mach benemen’.*

¹⁸² *‘Huysinghe ende huys vanden pellicaen’.*

¹⁸³ These are the colour conventions which would be maintained in Netherlandish architectural drawing practice for the next two centuries to come. See, Gerritsen 2006; Roëll 2010.

¹⁸⁴ On the use of scales in Netherlandish architectural drawings, see Hurx 2018, p. 272-73.

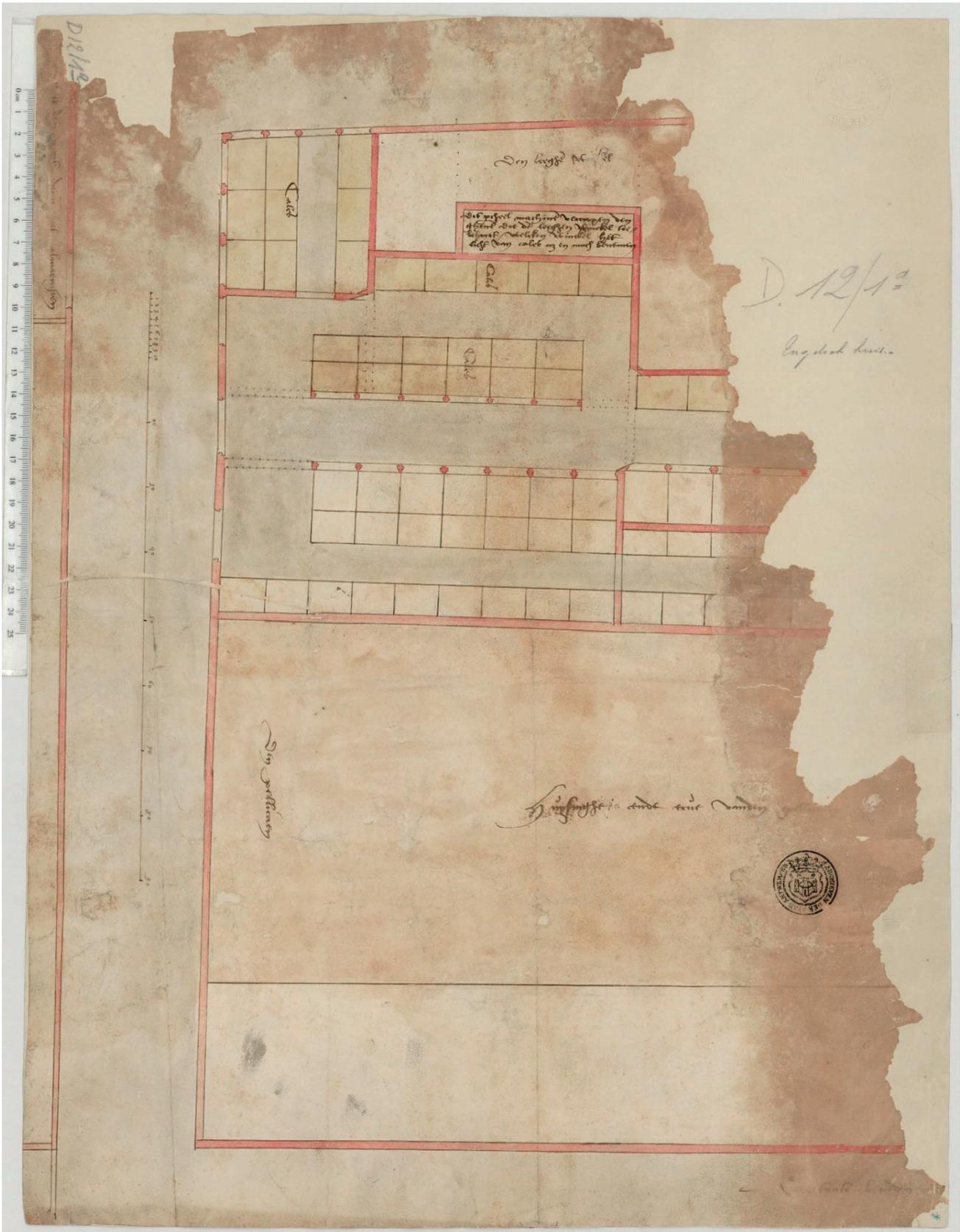


Fig. 2.7. Peter Frans, *Ground Plan for House of the English Nation (South side)*, ca. 1553-1558. Antwerp, City Archive, SAA 12#6264. Photo: © Stadsarchief Antwerpen.

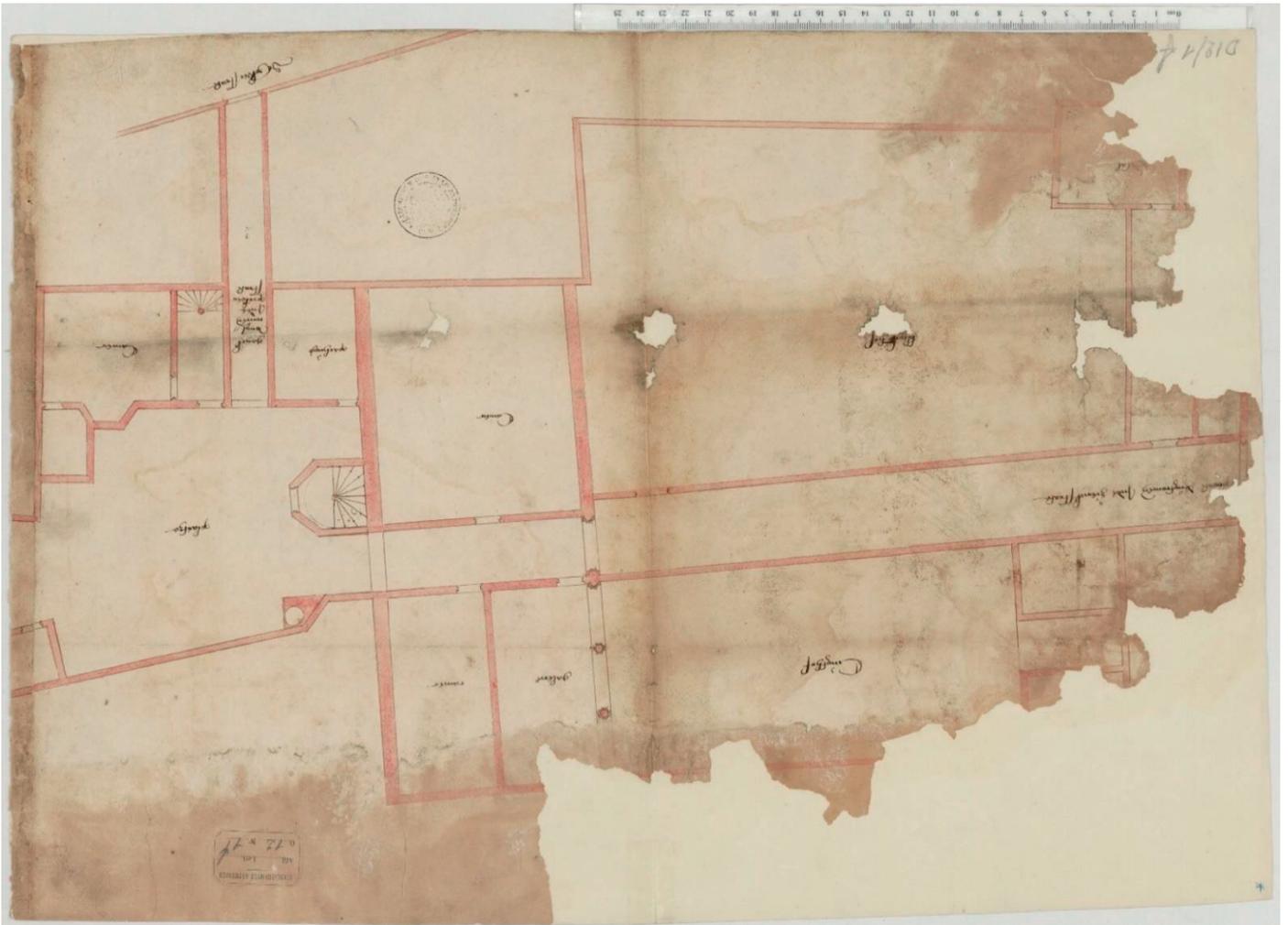


Fig. 2.9. Peter Frans, *Ground Plan for House of the English Nation (First phase of central section)*, ca. 1553-1558. Antwerp, City Archive, SAA 12#6260. Photo: © Stadsarchief Antwerpen.

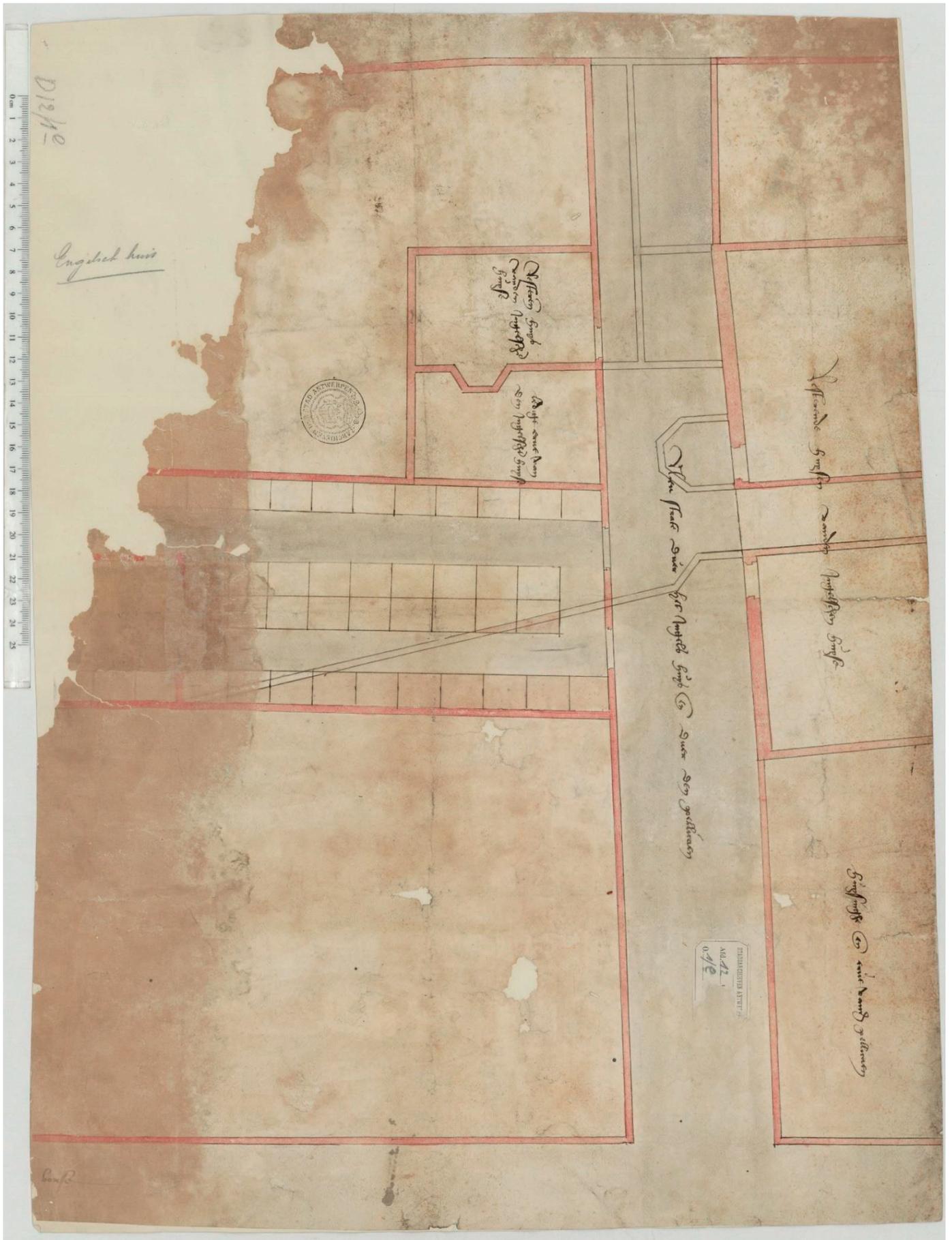


Fig. 2.10. Peter Frans, *Ground Plan for House of the English Nation (Second phase of central section)*, ca. 1553-1558. Antwerp, City Archive, SAA 12#6261. Photo: © Stadsarchief Antwerpen.

Drawings such as these, made by masons or stone cutters who operated as official land surveyors to the city, show a strictly practical phase in the design process as they serve a somewhat different purpose from presentation drawings. Rather than displaying a polished version of the building to impress the patron or a larger audience, these drawings served both to instruct the workers on the building site and to communicate the building propositions to the city administration. Since the ownership and sale of each plot is carefully mentioned on the drawings, the architectural ground plan also served as an administrative and juridical document to the Antwerp city government. This may also have been the reason why there are two almost identical sets of ground plans of the English nation house depicting the actual situation. The fact that these drawings by Peter Frans are so straightforwardly practical should not lead to the conclusion that this was due to a different social or artistic status of the draftsman. Work drawings and presentation drawings are two sides of the same coin. Renowned traveling architects such as Rombout II Keldermans and Domien de Waghmakere made many drawings, particularly for military constructions, which were to guide the constructions which contain the same amount of practical information, instructions, measurements, scales and identical colour conventions for walls and other constructions.¹⁸⁵ Comparable to the English nation drawings

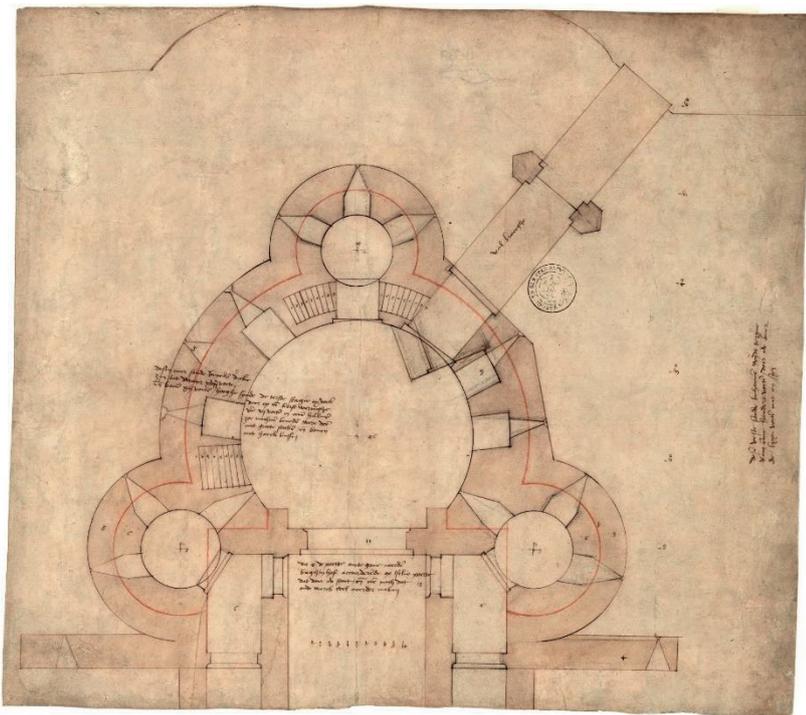


Fig. 2.11. **Domien de Waghmakere**, *Ground Plan of the Begijnenpoort Antwerp*, ca. 1506. Antwerp, City Archive, SAA 12#10772. Photo: © Stadsarchief Antwerpen.

are four ground plans made for alterations and defensive updates to the defence gates of the Antwerp city walls. The plans were drawn by Domien de Waghmakere, who functioned as the city master mason at the time. A drawing such as the ground plan for the Beguines Gate (*Begijnenpoort*) brings us at the earliest documented drawing in which the same conventions seen in the set of drawings of the English nation are applied (fig. 2.11).¹⁸⁶ The thickness of the walls is represented by double lines, full

¹⁸⁵ Other comparable drawings are those for the Utrecht Vredenburg and the fortified walls by Laurys (1532-1540), Rombout II and Marcellis Keldermans (c. 1500 - 1557) or Schoonhove castle by Rombout II Keldermans. Roosens 2007; Martens 2009, pp. 85-137; Hurx 2018, pp. 259-65.

¹⁸⁶ Roosens 2007, pp. 148-49; Hurx 2018, p. 272.

walls are filled in with red or brown wash, other structures such as door lintels are in black ink, dimensions and room functions are mentioned, and two scale lines indicate the intervals in Antwerp feet. Interestingly, the two levels have been superimposed by the addition of a thin red line which marks the second floor. Although the majority of these more practical drawings consist of ground plans, one elevation drawing of the earlier discussed Hof van Liere, indicates that elevations could have been instrumental to guide the building process (fig. 2.12). It depicts an orthogonal view of the facade of the city palace of the Antwerp Burgomaster, which was made either by Domien de Waghemaker during the construction of the building (1515-20), or by Peter Frans during the constructive alterations made to accommodate the building for its new purpose as English nation house between 1558 and



Fig. 2.12. Domien de Waghemaker (attrib.), *Elevation of Hof van Liere*, ca. 1515-20. Antwerp, City Archive, SAA 12#6232. Photo: © Stadsarchief Antwerpen.

1563.¹⁸⁷ Although this elevation may seem similar to the two drawings made for the Ghent town hall in 1528, the absence of perspective and especially the presence of a scale line at the left side of the sheet make this drawing more practical. A perhaps obvious but no less significant difference to earlier discussed presentation drawings, is that these practical drawings are not on parchment but on paper, making them less costly, less durable, and less exclusive. However, one purpose should not exclude the other. Since certain portions such as the trefoil tracery on the gable and windows are highlighted with grey wash, the drawing is not robbed of its aesthetic qualities to please the city officials who would be judging the construction proposals.

The importance of architectural drawings as intellectual property, both to the draftsman as to the patron was already illustrated by specific request by the Ghent city officials to the architects to guard the drawings throughout their lifetimes. But this was not only the case for expensive presentation drawings, which is demonstrated by the fact that Adriaen Bos inherited the entire corpus of drawings made by his predecessor as master of the works. This did not only guarantee a continuity in drawing conventions and quality between draftsmen, but it also provided the successor with a firm basis of documentation when renovations or alterations were planned, as may have been the case with the Hof van Liere elevation. An interesting document in this context is a marriage contract, dated 1560, between the Bruges stone cutter Jan Aerts and Antonine Maes in which it is stipulated that in the case when Jan should come to pass before his wife does, that she will inherit “all of his tools *and drawings*”.¹⁸⁸ These items are listed among other valuable possessions such as jewellery. It indicates the concern by the Bruges stone mason for the afterlife of his drawings as intellectual property so that his workshop and perhaps running commissions may be continued during the time after his death by his wife or his sons.¹⁸⁹

2.3. Between the lines: Architectural drawing traditions beyond the building practice.

As mentioned above, terms such as *metselfrie* and its Latin humanist translation *architecture* entailed much more than merely large-scale built structures; it could also refer to architectural ornament in

¹⁸⁷ The drawing has a late nineteenth- or early twentieth- century signature in modern graphite at the lower right corner, attributing it to Domien De Waghmakere. A sixteenth-century inscription at the lower margin, however, states ‘*dit is den ouden gevel van bet Inghels huys*’. Since the building officially only served this function since 11 October 1558, this serves as terminus post quem for the inscription and possibly the drawing. This implies that the drawing cannot be attributed to De Waghmakere who died in 1541. There is also a possibility that Frans had re-used the original elevation drawing of De Wagemakere to take the measurements for the refurbishing. Since Adriaen Bos had inherited all of Frans’s drawings, it is most likely that Frans too had inherited the drawings of his predecessor as master of the works of Antwerp. For the construction history of the Hof van Liere, see Brouwers 1975, pp. 7-24.

¹⁸⁸ ‘*voort alle synen balam ende patroonen, dienende ’t zynen ambochte van steenbaunen*’. Parmetier 1948, doc. 28.

¹⁸⁹ It was not uncommon for the wife of a craftsman or merchant to continue her husband’s business. Well-known cases are Volcxken Diericx (1525-1600) and Mayken Verhulst (1518-1599) who continued the business of their respective husbands Hieronymus Cock and Pieter Coecke van Aelst.

painted representations, furniture, micro-architecture, wooden retables or works produced by gold- and silversmiths. The most obvious professional group involved in architectural design and drawings are the sculptors or stone cutters since they also belonged to the masons' guild. The design of both architecture and sculptural works was embodied by the same person, as the 19th-century divide between sculpture and masonry would probably have sounded no less than absurd to early modern members of the masons' guild. Therefore, examples of famous master builders as sculptural designers are myriad. Matheus de Layens (active 1433-1483), the master mason responsible for the designs of the Leuven town hall and a considerable part of the St Peter's church at Leuven, also designed the elaborately decorated sacrament house (1450-53) and probably the choir screen in the same church.¹⁹⁰ In 1456-57 he was paid to deliver designs for a new sacrament house in the St Leonard church at Zoutleeuw as a predecessor for the Antique-styled sacrament house of Cornelis Floris.¹⁹¹ In 1465 he also made designs to be executed by a blacksmith such as the iron cross which was to top the spire of the church of Our-Lady 'ten Poel' in Tienen.¹⁹² When a sacrament house was to be constructed for the St Peter's church in Torhout, the church wardens explicitly demanded that the Bruges stone cutter Pieter Aerts would follow his own drawing on parchment and make it very lavish and in the Antique manner.¹⁹³ Similarly, Philip Lammekens (who also testified in the 1542 court case) delivered designs for several projects relating to ecclesiastical micro-architecture such as the rood screen in the St Catarina church at Hoogstraten in 1538.¹⁹⁴ Lammekens often delivered designs for projects which were to be executed by other sculptors. For the Abbey of Tongerlo he delivered drawings and wooden templates for the sacrament house which was to be executed by the stone-cutters Claudius Floris (uncle and teacher to Cornelis Floris), Willem van der Borch, Rombout de Drijvere and Conrad Meit.¹⁹⁵ Lammekens delivered drawings for the architectural framework (*metselrie*), while more figural sculptors such as Meit were responsible for the individual sculptures. The same agreement was made between Lammekens and Meit for a large sculptural entombment scene for which Lammekens was to

¹⁹⁰ Van Even 1895, pp. 355-56; Hulin de Loo 1913; Roggen & Withof 1944, pp. 159-71; Steppe 1952, p. 81; De Jonge, Geleyns & Hörsh 2009, pp. 42-43; Kik 2014b; Suykerbuyk & Van Bruaene 2017, pp 148-49. It was suggested by Roggen & Withof that de Layens may also have been responsible for the (now lost) sacrament house in the St Sulpitius church in Diest.

¹⁹¹ Hulin de Loo 1913, p. 562; Roggen & Withof 1944, p. 166.

¹⁹² Roggen & Withof 1944, p. 167.

¹⁹³ Parmentier 1948, doc. 13.

¹⁹⁴ Steppe 1952, 130-32; Duverger 1964, p.183; De Ceulaer 1988, p. 60.

¹⁹⁵ Duverger 1964, p. 183.

deliver the designs for the architectural framework and Meit would execute the life-size mourners surrounding the tomb.¹⁹⁶



Fig. 2.13. Anonymous Netherlandish and Jacques Dubroeuq, *Project for rood screen St. Waudru Mons, 1535*. Mons, Archives de l'Etat de Mons, cat. 437. Photo: © KIKIRPA.

This division between architectural and figural sculpture in the design process may have been more common. One of the best-known Netherlandish architectural drawings is the impressive presentation drawing made in preparation of the rood screen once in the St Waudru at Mons of 1535 (fig. 2.13).¹⁹⁷ The drawing on parchment shows a sumptuous perspectival rendering of this defining monument of Netherlandish Renaissance sculpture. Although the design has often been attributed to Jacques Du Broeuq, there is no factual evidence to verify this. He is only first documented at Mons in 1539 and his first payments for finished sculpture to the rood screen occurred in January 1545.¹⁹⁸ A

¹⁹⁶ Duverger 1934, pp. 56-58.

¹⁹⁷ Mons, Archives de l'Etat, Cartes et plans, inv. 412. The monument was dismantled in 1798. Although the figural sculptures and friezes by Du Broeuq have been preserved, the micro-architectural framework surrounding it has been preserved very fragmentary. On the Mons rood screen, see Hedicke 1904, pp. 402-11; Champagne 1926; Steppe 1952, pp. 214-33; Wellens 1962; Comblen-Sonkes 1970; Mons 1985, pp. 41-44; Kavalier 1994; Didier 2000, pp. 127-98; De Jonge 2007, pp. 38-39; De Jonge 2010b.

¹⁹⁸ Didier 2000, p. 141.

contract dated 10 September 1535, gives an astoundingly detailed description of the rood screen and was addressed to Hubert Nonon, a stone cutter from Dinant.¹⁹⁹ He was contracted to execute and deliver all the ornamental and architectural elements that were to be made from the black marble for which the Dinant quarries were so well-known. During the execution he was to follow the drawings, designs and templates that were sent to him with the commissioning contract.²⁰⁰ It seems very unlikely that the rood screen drawing is to be identified as one of the drawings mentioned in the contract of 1535. Not only because the heraldic roundels in the drawing do not correspond with the historiated roundels mentioned in the contract with Nonon, but also due to the use of perspective, the parchment support, and the lack of any indications of measurements, dimension or scale. The fact that the left and right side each represent slightly different ornamental and compositional design options makes this a highly finished presentation drawing *pur sang*.

Although the iconographical program with the Seven Virtues and scenes from the life of Christ is very relevant for the aesthetic and spiritual effect of the totality of the rood screen, the focus in the drawing is mainly on the architectural structure and Antique ornamentation. After close inspection of the drawing, it becomes clear that the figures of the Cardinal Virtues and the reliefs themselves had been drawn at a later stage and perhaps also by a different hand at places that had been left empty by the architectural draughtsman (fig. 2.14).²⁰¹ This division of different sections of a design by different specialised craftsmen is a remarkable feature, often omitted by a nineteenth-century image of the individual genius. That this was probably a more common practice becomes apparent in a court



Fig. 2.14. Anonymous Netherlandish and Jacques Dubroeuq, *Project for rood screen St. Waudru Mons* (detail), 1535. Mons, Archives de l'Etat de Mons, cat. 437. Photo: © KIKIRPA.

¹⁹⁹ The document is published in: Hedicke 1904, pp. 227-31; Didier 2000, pp. 196-7.

²⁰⁰ '(...) ou ouvrage que le pourtrait et patron dudit dozal démontré et que les moules lui seront baillez'. Hedicke 1904, p. 228; Didier 2000, p. 197.

²⁰¹ This was also suggested by Krista De Jonge, who offered the convincing proposal that the authorship of the architectural drawing may be attributed to an anonymous Netherlandish draftsman to whom she attributed a large corpus of antique design drawings, formerly described as the early work of Jacques Andouet Du Cerceau. This draftsman also showed some stylistic and typological affiliation with Jean Mone. See De Jonge 2007, p. 38; De Jonge 2010b, pp. 39-43; De Jonge 2010c; 2013a. Between the drawing of the relief scenes and their execution by Du Broeuq, the iconographical program of this section seems to have changed from scenes from the Genesis to scenes from the life of Christ. This dates these additions between 1535 and 1545. Most likely, they were also conceived in 1535, shortly after the drawing of the architectural section was finished.

sentence of 1551 where the aldermen of Bruges fined the stone cutter Jan de Smet, the sculptor Michier Scherier and silversmith Jan Cailliau, because they had failed to deliver their designs in time for the epitaph which was to commemorate Margaret of Austria.²⁰² Scherier had previously been involved in other prestigious commissions of the Habsburg nobility such as the tomb of Jean Carondelet (1540-46) and had been appointed in this commission as the main contractor (*annemer*).²⁰³ Yet, as stipulated in a previous contract, all three craftsmen were to deliver individual drawings based on their own expertise for the same commission.²⁰⁴

What the Mons rood screen drawing also illustrates is the fact that presentation drawings were not merely made within the context of large-scale building practice, but that they also included micro-architectural projects. Although we know very little about conditions in which many presentation drawings were displayed, analogous cases suggest that they also had a wider public function. When the iconoclasts had destroyed the sacrament house in Culemborg in 1569, the church wardens requested a stone cutter to make a drawing for a new sacrament house which “would be displayed in the church so that all the good people’s hearts would return devotional and so that they would contribute, thus avoiding the church fall into poverty”.²⁰⁵ Similarly, a contract between the wardens of the church of Our-Lady in Bruges and the sculptors Joost Aerts and Jan de Smet stipulated not only that they should execute the new sacrament house according to the drawing they had presented and agreed upon, it also explicitly mentioned that they should make “a large drawing on parchment which is to be beautiful and lavish (*schoone ende ryckelic*), with ornaments and sculptures such as the earlier drawing, in order to attach it to a wooden panel and display it in the chapel so that all the church goers would be able to see it”.²⁰⁶ In 1538 the wood carver Joris Asselyns was contracted to deliver a carved altarpiece for the St Quinten church in Leuven according to a detailed description stipulated in the contract. Interestingly, before installing the six individual sculpted figural groups in the *caïse* Asselyns was specifically requested to exhibit them in the church, together with a drawing of the whole

²⁰² Parmentier 1948, doc. 14.

²⁰³ During this commission as well, Scherier was sentenced to pay a fine. This time because he had recruited foreign assistants from outside the city, see Parmentier 1948, doc. 9; De Jonge 2007, p. 25.

²⁰⁴ ‘(...) den voorscreven patroone van desen wercke, wesende ooc uutghetrocken ende gheteeckent elc up zyne partie van denzelven wercke, achtereenvolgende per A, B, C etc.’. Parmentier 1948, p. 20.

²⁰⁵ ‘men hebbe ‘t hoochweerdige heylige sacramente moeten conserveren glijck ‘t selve oic noch geconserveert werdt in een houten viercante case totdat men wederom van een ander sacramentsbuys versien sal sijn, ende om deertoe te geraken hebben de kerckmeesters doen hangen om de goeden luyden ende herten des te beter tot devotien te verwecken ende de hant daertoe te reycken, soe de kercke ‘t selve armoetsbalven niet vervallen en soudén mogen’. Helmus 2010, pp. 125-26. Since sacrament houses symbolised the much-debated transfiguration, they were often the victims of Calvinist iconoclasts in the Low Countries. Also see Timmermann 2009; Suykerbuyk 2020, pp. 43-140.

²⁰⁶ ‘Item warden de voorn. Annemers ghebouden ‘thuerlieder eyghen coste te doen maken een patroon up parchemin, zere schoon ende ryckelic, met de ciraigen ende beilden, sulcx als ‘t voorn. Gheteeckende patroon es, omme tzelve an een houtten cassyn te doen beslane ende te stellen inde cappelle ten ghesichte van alle de parochianen’. Parmentier 1948, doc. 24.

altarpiece, so that the people would be able to see the work and that alterations could still be made by the church wardens.²⁰⁷

The last example immediately points towards the designs made by wood carvers, as has previously been touched upon with the Leuven court case against the Brussels woodcarver Mathieu de Waeyer who had refused to join the mason's guild since he was making drawings for *metselrie* (see chapter 1.6). Although drawings by wood carvers have amply been documented in contracts, very few of the actual drawings survived their utilitarian time span.²⁰⁸ A rare exception is an elevation drawing made by the Antwerp carpenter Omer van Ommen (ca. 1560- ca. 1620).²⁰⁹ Despite being an Antwerp wood carver, van Ommen was in high demand in the region of Occidental Flanders. Between 1593 and 1598 he received at least fourteen commissions for micro-architecture such as choir stalls, sculpted crucifixes, lecterns, or portals for churches at Ypres, Kortrijk, Nieuwpoort, Veurne, Menen and Diksmuide.²¹⁰ Most likely there was a local lack of expertise in Antique carving, which allowed the Antwerp wood carver to work in these 'foreign' cities. An elevation drawing by Van Ommen, dated 1593, was part of a commission for the new inner portals for the St Martin's church at Kortrijk (fig. 2.15).²¹¹ The elevation is rendered in perspective and gives a highly detailed representation of the wooden church portal consisting of an ornamental cornice supported by volute consoles and six well-proportioned Corinthian columns. As is common in architectural drawing practice, only the right side had been elaborated with ornamental detail and fluted columns. Given the Antwerp woodcarver's understanding of classical orders and his familiarity with the ornamental style of Cornelis Floris and Hans Vredeman de Vries (particularly in the consoles and strapwork cartouches in the inner frieze), it becomes clear why Van Ommen is referred to in the Antwerp Liggeren as *Antyc* or *antiecsnyder*.²¹² The handwritten text on top of the drawing clarifies that the portal was to be made in Antwerp and

²⁰⁷ '(...) en dat exhiberen tot Lovene in Sinte Quintens kercke voirscreven voere de goede der selve prochien, tusschen dit en Kersmesse naistcomende en dat men eenen patroen tot gebedden tafelen, soe hij die tafele voirts soude volmaken ende ingevalle dat dit selve voircreven point, en oick tpatroen den selven goede mannen niet aen staet, dat den selve Jorys tselvepoint en patroen tot hem nemen sal'. Crab 1977, p. 338, doc. 41; Jacobs 1995, p. 92.

²⁰⁸ On drawings in Netherlandish wood carver's workshops, see Jacobs 1995; Jacobs 1998, pp. 210-32; Woods 2007, pp. 42-53; Theunissen 2017, pp. 55-58.

²⁰⁹ Although nearly forgotten today, Omer (or Otmaet) van Ommen was a productive and much sought-after wood carver and ornamental sculptor. In 1588 he is mentioned in the Liggeren as an *antiecsnyder* and was chosen as dean of the guild in 1616. In Antwerp he was commissioned works on altarpieces and carpentry in the church of Our-Lady (1585, 1588), he was commissioned to make the new choir stalls of the same church in 1606-07, and the architectural wooden framework surrounding the main altarpiece at the church of St Andrew in 1594. He also prepared several panels for Antwerp painters such as Maarten de Vos. Between 1588 and 1613 he received 6 apprentices. See Rombouts & Van Lerius, 1864-76, pp. 328-29; Van Damme 1990, pp. 196-97.

²¹⁰ On his commissions in Flanders, see Gullet 1903-04; Deschrevel 1962.

²¹¹ Kortrijk, MO S/2022. Many thanks to Sarah van Ooteghem for bringing this drawing to my attention.

²¹² Van Ommen was probably inspired for his designs by the examples given by Hans Vredeman de Vries in the print series *Different Pourtraicts de Menuiserie*, published in Antwerp by Phillip Galles in 1583. It includes several printed designs for portals and was immensely popular among decorative carpenters around Europe. On Vredeman de Vries and his influence on the applied arts, see Uppenkamp 2002; Fabri 2005.

subsequently placed in the church at Kortrijk.²¹³ The text also indicates that the drawing functioned as a presentation drawing which the church warden Beulins and Van Ommen agreed upon by both signing the drawing. Additionally, the drawing also includes a scale line with intervals from 1 to 15. The perspectival drawing perhaps reflects the self-image of the Antwerp wood carver since he did not only include his monogram when signing the contract agreement but included it at the central column base and once more in the escutcheon of the right door which boastfully echoed the Holy Cross at the other side.

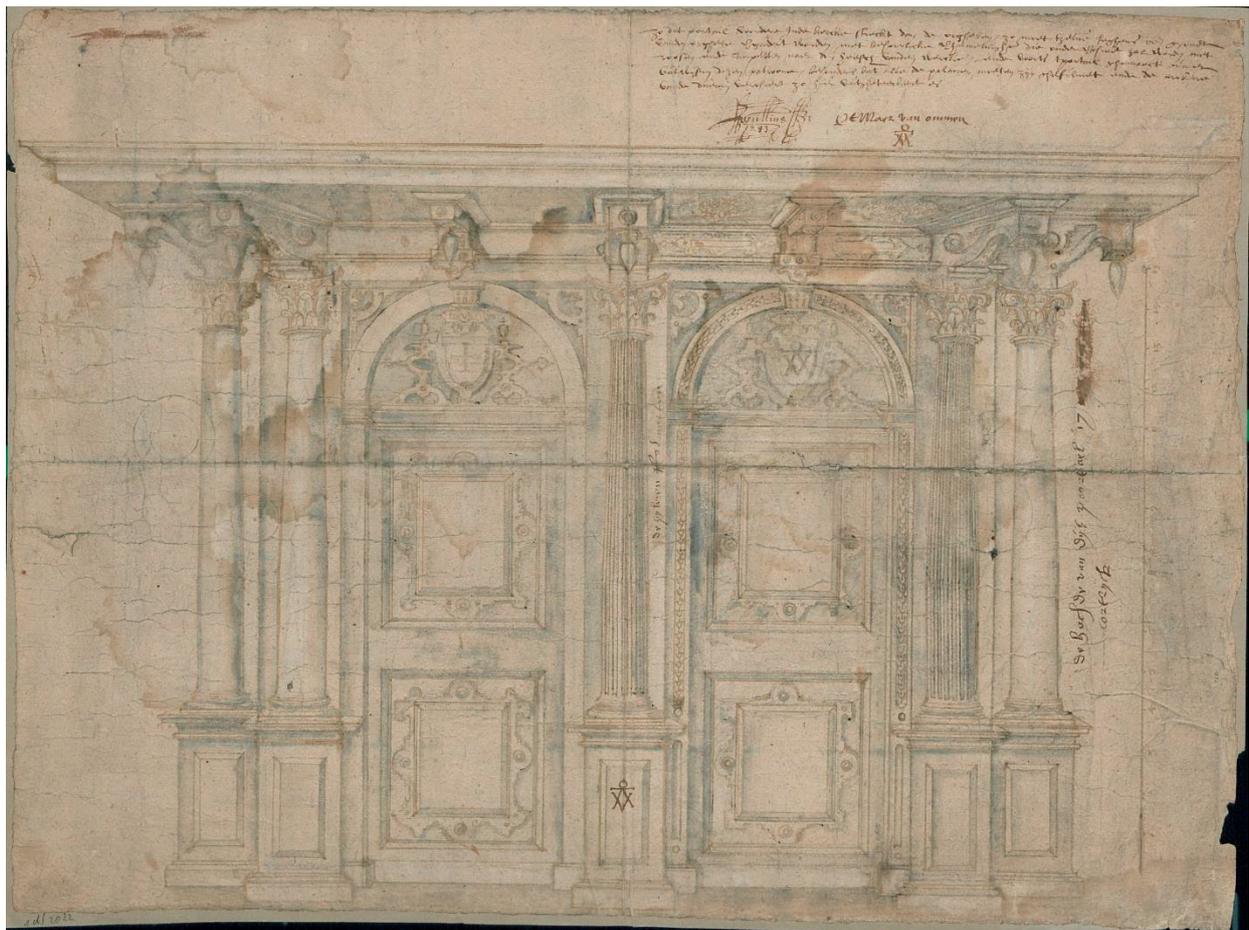


Fig. 2.15. Omer van Ommen, *Elevation of inner church portal*, 1593. Kortrijk, Collectie Stedelijke Musea, inv. 2022. Photo: © TREZOR.

²¹³ '(...) ende voersc. ghemaect naer Atwerpen tvolgen desen patroone'.

Another crucial professional group well-versed in the architectural complexities and the skills to design them in the early modern urban society were the goldsmiths. Although it has been proposed that designs from which goldsmiths executed their reliquaries, monstrances or chalices were provided for by other craftsmen such as ‘painter-inventors’, both contracts and physical evidence illustrate here also that any self-respecting and ambitious goldsmith was expected to be able to create his own designs.²¹⁴ In 1529, when the Brussels goldsmith Hendrick Bosch had received a commission to deliver a new reliquary for the church of St Gudele, he said that would execute it following his earlier design, and even improve upon it during execution.²¹⁵ As in many building contracts, the contract between goldsmith and commissioner could also refer towards certain examples which were to be followed or were to be emulated upon. In the contract of Herbert Happensoon, a silversmith from ‘s-Hertogenbosch it was dictated by the church wardens of the town of Oss in 1491 that he was to follow the original drawing and the design of a monstrance which he had previously made for the brotherhood of the Holy Sacrament in ‘s-Hertogenbosch.²¹⁶ The contract of Happensoon suggests that the Oss church wardens expected that the original drawing of the earlier monstrance was still available to the silversmith. This hints towards a workshop practice where the drawings for earlier commissions were kept as workshop drawings for the master and his apprentices.

²¹⁴ On the reliance of goldsmiths on painters for the delivery of design drawings, see Antwerp 1988, pp. 32-33.

²¹⁵ Roobaert 2003, pp. 173-78.

²¹⁶ *In den yerst sal die voors. Herbert die cyborie voirs. Maken naden patroen ende maecsel dat hij die cyborie gemaect heeft der gulden vanden heiligen sacrament van bosch ter preekren uutgenomen dat hy die lager sal maken omtrent van twee vingeren breed*. Helmus 1990, p. 476-77, 480-81, doc. 2. The design of ‘s-Hertogenbosch may have been inspired by the designs and engravings of Alart Duhamel, who was the main architect at the St John church in that city (see chapter 6).

One such drawing represents an elevation of a bishop's crozier, conspicuously rendered in perspective, and finished with a grey wash (fig. 2.16).²¹⁷ The design, which can stylistically be dated in the late 1540s, makes use of the most avant-garde Antique ornamentation and architectural innovations akin to Jean Mone's style, yet structured like a *modern* Gothic spire. Central in the micro-architectural piece of goldsmith work are the three Theological Virtues: Fides, Spes and Caritas. The latter takes a prominent role since "the greatest Vitruve is Love" (1 Corinthians 13:13). The use of a perspectival rendering to represent the object would make it nearly impossible for any goldsmith to derive any structural logic, were it not that the elevation is accompanied by a triangular geometrical ground plan in which all levels of the object are superimposed. The circular structures shown on each side of the equilateral triangle, for example, represent the small temple-like structures carried by caryatides which otherwise



Fig. 2.16. Anonymous Netherlandish, *Design Bishop's Crozier*, ca. 1540. London, Victoria and Albert Museum, inv. E 739-1912. Photo: © Author, with permission of the V&A.

could have been interpreted as more triangular. Other inclusions of such *ad triangulum* geometrical schemes by Netherlandish architectural designers are found in the engravings of Alart Du Hameel and the anonymous Netherlandish engraver Master W (see chapter 6). With its highly finished execution, the drawing holds a position in between a workshop drawing and a presentation drawing and could have had this double function. Drawings such as these were common in the daily workshop practice and were valued as the intellectual property of the workshop. Their Antique design would have

²¹⁷ London, Victoria and Albert Museum, inv. E 739-1912. The drawing had been published as by Jacques Androuet Du Cerceau, but has recently been localised in the Netherlands, see Byrne 1977, no. 2; De Jonge 2011a, p. 205.



Fig. 2.17. Anonymous Netherlandish (?), *Design for a monstrance*, ca. 1530-40. New York, Metropolitan Museum of Art, inv. 1980.1094.2. Photo: © Metropolitan Museum.

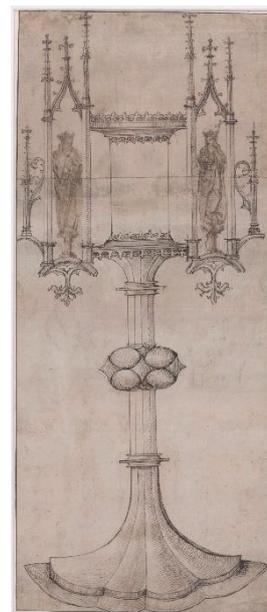


Fig. 2.18. Master WA (attributed), *Design for a monstrance*, ca. 1480-1520. Amsterdam, Rijksmuseum, inv. RP-T-1957-173. Photo: © Rijksmuseum.

appealed many craftsmen and their future clients. The recently composed corpus of drawings by an anonymous draftsman and engraver working in the Low Countries in the 1530s and 1540s seems to have jumped into this mercantile opportunity, answering both to a demand of local architectural designers, but also to a select group of collectors at the high end of the market (fig. 2.17).

Not all workshop models and prints had this high level of refinement. These elaborate Renaissance drawings stand in stark contrast to an earlier drawing of possibly Netherlandish origin. It too represents an elevation of a gothic monstrance, dated ca. 1480 (fig. 2.18).²¹⁸ The fairly simple design with well-balanced tracery at both sides of the holy host gave craftsmen ample opportunity to further develop upon. Although we cannot be certain that this design was made by a practicing goldsmith, its straightforward orthogonal rendering, and the use of cross-hatching to create depths show a strong similarity to the design engravings produced by Master W, who is often connected to goldsmith practice (see chapter 6).²¹⁹ Like in the Mons rood screen drawing, the figurative elements have been added at a later stage and probably by a different hand. Especially the left figure of St Catherine shows less determination in its pictorial rendering as the folding textile at her feet seems to have been redrawn. It recalls a 1484 contract for a monstrance between the church wardens at St John in 's Hertogenbosch and the silversmith Henric Borchgreve. The latter was to follow a drawing made by Alart Du Hameel, master of the works at said church, who was still to add the figures (*beelden*).²²⁰ Clearly the architectural and figural designs were treated as two separate design phases which could

²¹⁸ Amsterdam, Rijksmuseum, RP-T-1957-173. The drawing has been attributed to Master WA by the Rijksmuseum.

²¹⁹ The Rijksmuseum attributed the drawing to Master W or an artist working in the Lower Rhine. The four bulges on the shaft, however, point more towards a German origin.

²²⁰ 'neden patroone, dat meester Alart die meester vanden warcke van sunte jans, dair op ontworpen heeft, ende noch voirt volmaken zal mette beelden'. Helmus 1990, p. 476, doc.1

be divided over two different artists, if required.²²¹ Du Hameel's experience as a designer and architectural advisor for major building projects in 's-Hertogenbosch, Leuven and Antwerp certainly qualified him to design for related craftsmen working in architectural ornament. Design stood independent from guild and craft divisions, or quoting from the 1542 court case, it was "an art on its own" (*een conste op haer selve*). Du Hameel's successor at the building site of St Peter's church in Leuven, Matthijs III Keldermans (1440-1527), was paid in 1507 to deliver ground plans to the local wood carver Jan Petercels for a wooden altarpiece depicting the life of St Arnoldus.²²²

2.4. Painters as designers of Architecture

The right and ability to design architectural objects also extended to painters. The main question here is whether they really functioned as new professional players as has been proposed. Some documented instances suggest that the involvement of painters with design commissions which reached beyond the disciplinary boundaries of the Guild of St Luke, is much more a story of continuity, rather than a so-called paradigm shift. Perhaps the earliest example can be found in the complex building history of the Cathedral of Milan, known in architectural history as a collaboration of local Lombardian and northern design traditions.²²³ Since the Duke of Milan, Gian Galeazzo Visconti, was married to Isabelle de Valois, daughter of Jean le Bon, the Milanese house became closely affiliated with the French and Burgundian cultural traditions. This probably influenced the increasing involvement of northern specialists in the construction of the new cathedral, which started in 1387. Infamously, this led to a problematic discussion over theoretical and structural design principles between transalpine and Italian building masters. Gothic design principles were based on the strict application of geometrical rule of thumb, in which the using the equilateral triangle is applied as basic form. This led the French master mason Jean Mignot, to famously exasperate "*Ars sine Scientia, Nihil est*", to underline the importance of geometrical base rules in the design of architecture, rather than proportions. In 1399, after consulting various northern master masons, Jacques Coene, Jean Compagniosus and Jean Mignon, were invited as '*ingegneriis*' to the Fabbrica of Milan by mediation of Visconti's agent Giovanni Alcherio.²²⁴ Jacques Coene, a Bruges illuminator working mainly in Paris at the time, was appointed to "*dissegnare ecclesiam a fundamento usque summitatem*", most likely indicating an elevation drawing of the façade. The appointment of an illuminator as architectural

²²¹ Derived from his varied print production, Du Hameel may have been very capable of adding the requested figures.

²²² *'gehyc den patroen dat uutnyst ende gelyck Matys Keldermans deser stadt meester metsere den gront vandenselven patroen getrocken heeft'*. Crab 1977, p. 324; Mosselveld 1987, p. 22; Jacobs 1995, p. 91; Helmus 2010, pp. 111, 369, doc. 26.

²²³ Ackerman 1949.

²²⁴ Other northern masters consulted during the design campaign were Nicolas de Bonaventure of Paris, Heinrich Parler III of Prague and Ulrich von Ensingen of Ulm. Meiss 1968, pp. 60-61; Heinritz 1993; Borchert 1995, pp. 336-37.

engineer was not without precedent at the Milanese Fabbrica, since the position of *ingegneri generale* was previously held by Giovannino dei Grassi (c. 1350 – 1398), Gian Galeazzo Visconti's most treasured illuminator.²²⁵ One might argue that the appointment of Coene as architectural designer could be considered more in agreement with Italian traditions. Most famously, Giotto - whose painted architecture showed great and profound knowledge of antiquity - was appointed as *capomaestro* of the campanile of Florence Cathedral in 1337.²²⁶ Nonetheless, Coene's recommendation as architectural designer for Milan cathedral suggests that he already enjoyed a reputation in architectural drawing or design, or at least it proposes that it was not uncommon for northern painters to be involved in architectural design. One gets a similar impression when reading Antonio Filarete's *Treatise on Architecture*, composed in Milan somewhere between 1460 and 1464, in which the artist famously complains that Italy was swamped with "customs and traditions from the north of the Alps, imported not by real architects but by painters, stonemasons and, particularly goldsmiths who practiced what they liked and understood so that buildings came to be fashioned in the likeness of tabernacles and censers".²²⁷

In 1440-41 the Carpenter's Guild of Brussels paid 28 *stuivers* to Rogier van der Weyden to deliver a *beworpe* (design) to rebuild their guild hall, the *Tinne Pot*, on the east side of the Grand Place.²²⁸ Based on iconographic sources, we can assume that it was ensemble of six identical guild houses, with little decorative elements. The *berderen* or wooden models for the stone cutters to use, were to be delivered by the city's master mason Willem de Voghel. Van der Weyden was probably working in his capacity as town painter and in collaboration with master mason Gillis Joes, with whom he had already collaborated at the Chapterhouse of Herne, near Enghien.²²⁹ The exact nature of Van der Weyden's drawing remains ambiguous. The *beworpe* mentioned in the contract could be referring to an elevation drawing or might also be reference to some sculptural detail intended on the façade; Van der Weyden's involvement in sculptural commissions has been well-documented and as town painter, he would have been responsible for the design of sculpture for civic buildings, such as he had done in the case of the famous *Scupstoel* drawing for the town hall.²³⁰ Nevertheless, this does illustrate the close collaboration between sculptors, master masons and painters, and the transdisciplinary function of design.²³¹ This cross-fertilization is strongly reflected throughout the painted oeuvre of Van

²²⁵ Borchert 1995, pp. 332-335.

²²⁶ Trachtenberg 1971. On Giotto's painted architecture, see Benelli 2012.

²²⁷ Quoted from Panofsky 1965, p. 22. Ironically, Filarete also hails Brunelleschi as the innovator of modern architecture, while he was of course trained as a goldsmith.

²²⁸ Dickstein-Bernard 2008; Campbell 2012, pp. 23-24; Fransen 2013, p. 150.

²²⁹ Fransen 2013, p. 108-109; Campbell 2015, p. 20.

²³⁰ Hadermann-Misguich 1979; Fransen 2013.

²³¹ The combination of painting practice with the design for sculpture may have been more common. Another early example from the Burgundian Netherlands is the artistic career of André Beauneveu (c. 1335-1400). While working

der Weyden, most prominently perhaps in the elaborate church interior of his *Seven Sacraments Triptych* of ca. 1450.²³² In connection to his presumed architectural drawings, recent technical research on the inner panels revealed lines and incisions in the wet paint layer.²³³ Nearly all incised lines are perfectly straight and must have been drawn with a stylus and ruler. Along most of these lines prick holes are visible at regular distances, which indicates the usage of a compass for the preparation of the geometrical and architectural framework of the church interior, much in the same way as one would commence a gothic architectural drawing. Especially for the fifteenth-century situation, there is only a fine line to make the distinction between a more technical architectural drawings and drawings made by contemporary painters of late gothic architectural features.²³⁴

In 1469 Jehan Hennecart (active 1454-1475), painter and *valet de chambre* of Charles the Bold, is paid to deliver drawings for a castle in Ghent and later also in Woerden.²³⁵ In 1467 he also received payment for designs he made for gold- and metal objects such as a golden cross and designs for a silver falcon, to be executed by the renowned goldsmith Gérard Loyet.²³⁶ It is also worth mentioning that the Bruges painter Frans vanden Pitte was paid in 1485-86 for the delivery of sculpture designs on the façade of the Bruges town hall, which included architectural baldachins.²³⁷ During the years leading up to the building of the new town hall of Ghent, we find a payment made in 1482 to the Ghent painter Agnes vanden Bossche for making “various designs, explaining how the stonecutters should continue their work, based on her drawings”.²³⁸ Not only does this make her one of the rare examples of female painters, it is the earliest recorded instance of a women involved in architectural design practice. Since the account specifically mentions the reliance of the stone cutters on her designs her involvement in the building project will probably have exceeded the mere aesthetic involvement of painters in presentation drawings. Painters were often involved at this stage of the designs process, to deliver the aesthetic presentation drawing, based upon the more technical and often more measurable designs. This may be the case with the elevation drawing of a never-executed design of the Ghent belfry tower

as a sculptor for the French royal court of Charles V, Louis of Male, count of Flanders, and Philip the Bold, he was also active as a miniaturist in the service of Jean, Duke of Berry, see Nash 2007, pp. 106-143.

²³² Antwerp, Royal Museum of Fine Arts, inv. 394.

²³³ Steyaert 2012, pp. 132-33.

²³⁴ The elaborate Brabantine gothic tower depicted in Jan van Eyck’s famous *St. Barbara* drawing of 1437, for example, shows such great resemblance to gothic architectural presentation drawings that this familiarity in drawing arches, pinnacles, ogives, and buttresses makes it seem logical for painters to be commissioned architectural drawings for real building projects.

²³⁵ Duverger 1964, p. 181, n.6.

²³⁶ McKendrick 2003, p. 234. On Loyet, see Van der Velden 2000.

²³⁷ Parmentier 1948, p. xiv.

²³⁸ *‘van diversschen betrecken te makene ende date boemen twoorsejde weerc anlegghen soude den steenhauwers omme haerlieder patroenen’*. Van Tyghem 1978, vol. 1, p. 81. As a painter she received commissions to paint figurative and decorative wooden and stone carvings (*stofferen*). Three years later in 1485-86, the painter Pieter Bulteel is paid for delivering a mould at the building site. Van Tyghem 1978, vol. 1, p. 91.

(fig. 2.19).²³⁹ Dated ca. 1320, it is the earliest preserved architectural drawing in the Low Countries.²⁴⁰ It stretches over four pieces of parchment and is painted in black ink, with red and green colouring. At the lower left of the drawing a gothic inscription reads “*dbeweerp vanden beelfroete*”. This caption, along with many anecdotal details such as trumpeters, strongly suggests a public display of the drawing.²⁴¹ The polychrome elements point towards the responsibility of painters, which were very active in fourteenth-century Ghent for wall-decorations and banners.²⁴² Nevertheless, analysis of the drawings shows a geometrical base which underlies the composition. The presence of dry lines underneath certain sections such as windows, lintels and wall contours indicate the use of ruler and compass. The latter was used to draw the quarter circles of the pointed arches.²⁴³ The geometrical logic behind the drawing is based upon a stacking of squares, and thus relies on the “Ad Quadratum” method.²⁴⁴ With the exception of the figurative frieze, the tower is composed of square blocks, alternated by a rectangle half the height of the square (fig. 2.20). This system is only maintained until the level of the first balustrade, from where these geometrical volumes only constitute to more decorative elements such as the side towers or the second balustrade. Interestingly, the pictorial orthogonal visualization and the proportional system of the tower drawing brings to mind the strikingly similar and contemporary architectural drawing often attributed to Giotto for the Campanile of the Sta Maria del Fiore in Florence, dated ca. 1334 (fig. 2.21).²⁴⁵ Here too, the painterly qualities are skillfully combined with a strong sense of square geometrical volumes, not unlike Giotto’s own painted representations of architecture.²⁴⁶ As noted earlier by Hurx, Giotto’s drawing applies more perspective and foreshortening in order to render a convincing image of the Florentine edifice.²⁴⁷

²³⁹ Ghent, STAM, inv. 426.

²⁴⁰ Van Werveke 1905. Since the first three levels of the drawing (under the freeze) correspond to the built situation, it is datable between 1314 and 1423.

²⁴¹ Hurx 2018, p. 183.

²⁴² Martens 1989, p. 171.

²⁴³ As the parchment has been glued on a textile support during the second half of the nineteenth century, the dry lines and compass prick holes have become difficult to read.

²⁴⁴ De Smidt 1974.

²⁴⁵ Siena, Museo dell’Opera del Duomo. Trachtenberg 1971, pp. 29-48; Ackerman 2002, pp. 44-45; Radke 2003, pp. 97-101

²⁴⁶ On the proportional system of the campanile, see Hueck 1977.

²⁴⁷ Hurx 2018. Perhaps even closer in comparison is a coloured elevation drawing for the *Liebfrauenmünster* in Ingolstadt, dated 1520, and attributed to Erhard Heindenreich, see Beltrami 2016, p. 27, fig. 7.

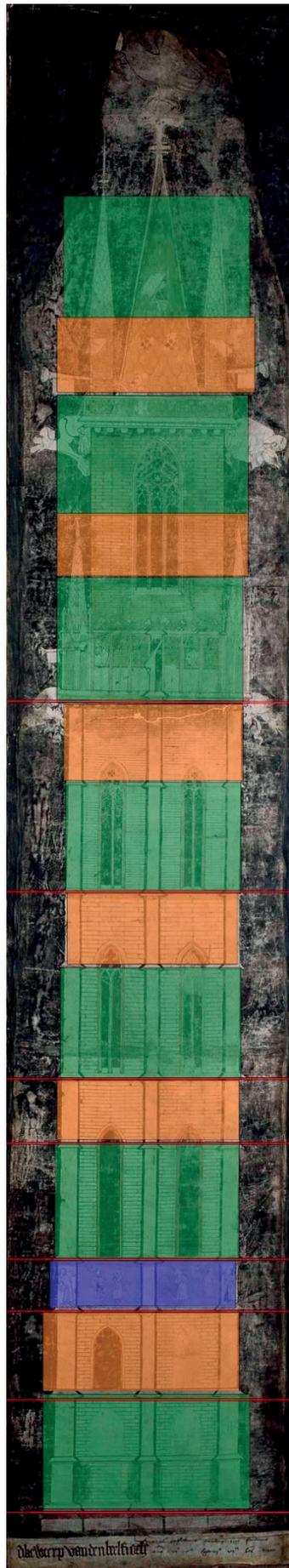
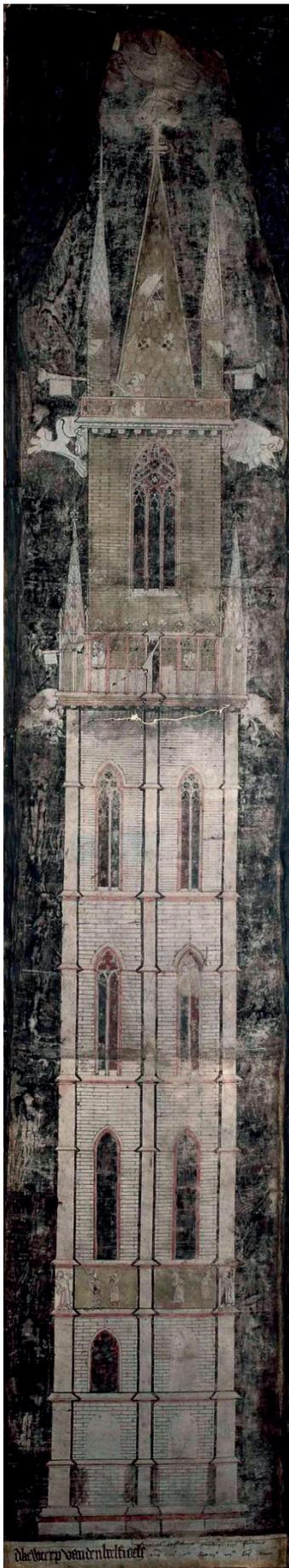


Fig. 2.19 & 2.20. Anonymous, *Design for Ghent Belfry*, ca. 1314-1323. Ghent, STAM, inv. 426. Photo: © STAM.

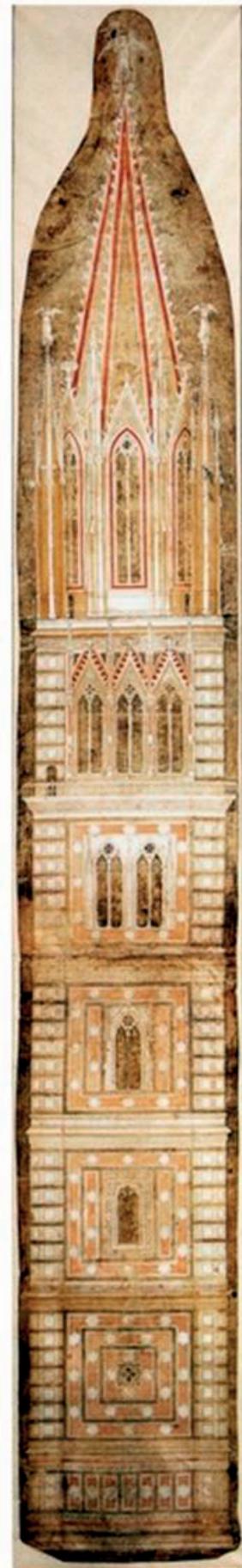


Fig. 2.21. Giotto (attrib.), *Design for Campanile Sta. Maria del Fiore*, ca. 1434. Siena, Museo del Opera del Duomo.

Although some painters had proven to have been skilled with enough technical knowledge to deliver executable designs, the lack of technical information on some of their drawings would lead to frustration. When the goldsmith Hendrick Bosch made the earlier discussed design for a reliquary, commissioned by the church wardens of St Gudele in 1529, an unnamed painter would use the goldsmith's technical drawing to execute a new drawing on a larger scale and with new additions. The goldsmith promised "to execute the design as faithfully as he could even though painters are unable to deliver a drawing which includes executable details".²⁴⁸ This recalls an oft-cited letter by the architect Michiel Heynrich to the king of Denmark 1521 explaining that his drawings may not be so pleasing to the eye as those of a painter, but at least his included ground plan would be measurable.²⁴⁹

Despite these precedents, the dawn of the sixteenth century seems to mark a significant increase in available sources and contracts which are testimony of the involvement of painters in architectural projects. This ranges from writings on architectural theory, the design of ephemeral architecture for Joyous Entries, and architectural sculpture. Many of the architectural designs for which painters were commissioned consist of microarchitecture. These structures - oscillating between the categories of sculpture, furniture and architecture - range from modest-size pulpits or baptismal fonts to the monumental tomb monuments, epitaphs, tabernacles or choir screens in church interiors.²⁵⁰ Disregarding their smaller and sculptural nature, designing these often very complex and intricate structures required a great understanding of architectural construction and geometrical principles; designing a gothic spire for a golden monstrance depended upon the same set of rules as a fully-sized cathedral spire. Compared to major building projects, however, works of microarchitecture could easily be constructed over a short time span, ensuring control by the designer, patron and executor over the creative process.²⁵¹ By the early sixteenth century many of these structures would speak with a predominantly architectural vocabulary, either through the geometrical complexity of modern gothic open tracery, or through the voice of Antique-shaped columns and entablatures. Given their relatively small size, and their significant religious or social meaning, they became ideal for experimenting with the most avant-garde stylistic novelties. It was especially in this field of microarchitecture that we find most examples of painters' involvement in the creative design process.

The variety of commissions received by Jan Van Roome (active 1498-1521) provides us with a good view on artistic versatility. In 1509-10 Van Roome delivered designs for eleven statues depicting dukes and duchesses which were to top the pillars of the stone fence of the Baliënhof at the Brussels

²⁴⁸ Roobaert 2015, vol. 1, p. 247.

²⁴⁹ Ottenheym 1999, p. 34; Gerritsen 2006 p. 23; Hurx 2018, p. 281.

²⁵⁰ On the term micro-architecture, especially see Bucher 1979, Kavalier 2012, pp. 165-229.

²⁵¹ Kavalier 2012, p. 167.

Coudenberg court; the fence itself was designed by Anthonis II Keldermans.²⁵² Probably his most prestigious commission came in 1516 with the design for the tombs of Margaret of Austria, and her late husband Philibert of Savoy at the church of St. Nicolas-de-Tolentin at Brou.²⁵³ The designs were to be executed by Loys van Boghem, who was already involved in the architectural design of the church itself. In 1526 Conrad Meit joined the team of sculptors, for the figurative elements. The highly

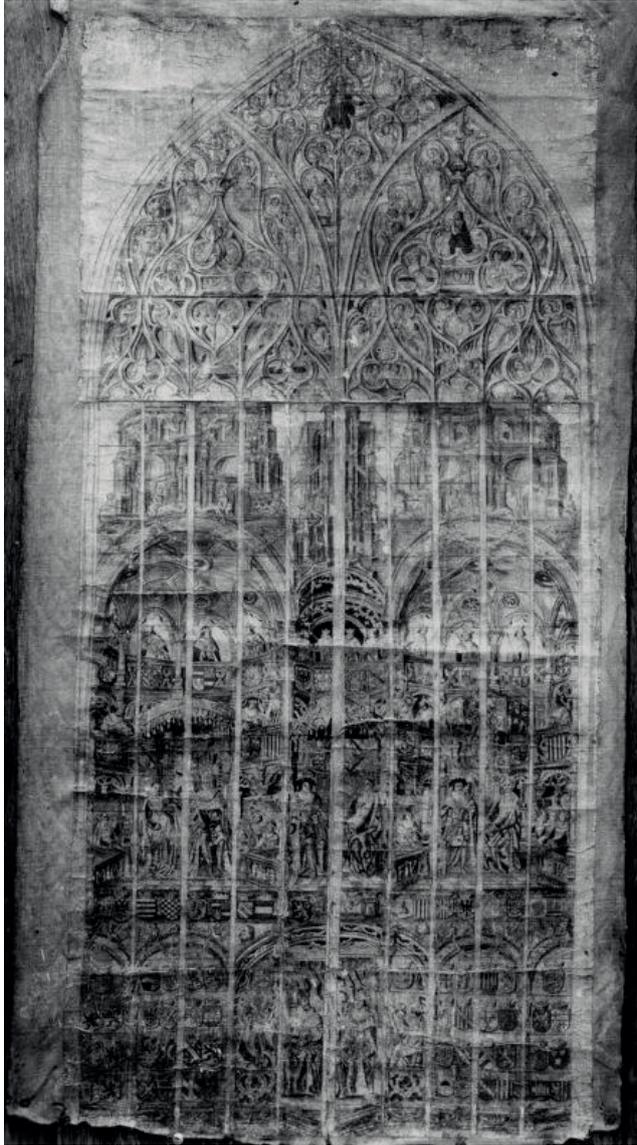


Fig. 2.22. Jan Van Roome, *Design for a genealogical window*, 1516-21. Mechelen, Aartsbisdom Mechelen-Brussel, Kerkfabriek Sint-Romboutskathedraal, inv. 1947.00410. Photo: © KIK-IRPA.

ornamented canopy is an illustration of how sculpture and architecture were able to merge into one unity. Despite these commissions for marvellous works of micro-architecture Van Roome was best known by his contemporaries as a painter. In several contracts, including the Baliënhof contract, he is mentioned as a painter, and often signed his name in combination with a shield of the Guild of St Luke. In 1516 he received a commission by Emperor Maximilian and his grandson Charles to design the stained-glass window of the south transept of the church of St. Rombouts in Mechelen. Although the original windows have been lost, the preserved cartoon is a showcase of the artist's abilities in architectural design as the architectural frame perfectly blends *modern* with the newest elements of Antique ornament (fig. 2.22). Despite his contemporary fame as a painter, no work on panel has yet been attributed to him. The only other frame of reference to his visual style is a design made in 1513 for a Herkenbald tapestry in Brussels.²⁵⁴

²⁵² Jan Borremans was to make a wooden model of the sculptures, before they were cast in brass by Reinier van Thienen. Dhanens 1945-48, pp. 45, 54-56. Both these artists had previously collaborated in 1495-1502 at the tomb of Mary of Burgundy in Bruges.

²⁵³ Dhanens 1945-48, pp. 60-78; Hörsch 1994; Kavalier 2004; Burk 2006; Briat-Philippe 2018.

²⁵⁴ Brussels 2013, p. 358, n. 97.

Van Roome's famous townsman Bernard van Orley, has recently been known to have been involved in some architectural commissions as well. In 1532, the Brussels artist received a payment from the vestry of the collegiate church of Sts Michael and Gudula to make a copy of a plan of the chapel of the Holy Sacrament, built between 1531 and 1540.²⁵⁵ Although the document only speaks of a copy being made of an original architectural drawing, it does illustrate that Van Orley's architectural knowledge - showcased in the architectural backgrounds of his panels, tapestry designs and the glass-stained windows for the same chapel – was considered to be sufficient in order to copy the architectural drawing. His architectural expertise is confirmed by an earlier document of 1524-25 where Van Orley is paid by the wardens of the church of Sint-Pieters-Leeuw to draw plans for a new construction.²⁵⁶ During the same year Van Orley was listed as a witness in the minutes of a meeting considering the foundations of the church of St. Géry, a structural problem which was to be solved by Loys van Boghem.

It was not uncommon for painters who were known for their two-dimensional painted architecture to be consulted on architectural hearings. An oft-mentioned case of a painter involved in architectural commissions is that of Jan Gossart's advice on the Utrecht choir screens.²⁵⁷ In 1517 designs for a new copper screen for the St. Martin's chapel of the Dom church in Utrecht were commissioned with Henrick die Zwart of Gouda. A wooden model was made by the wood carver Gregorius Wellemans, which was to be cast by the brass founder (*geelgieter*) Jan vanden Eynde from Mechelen. In 1519 Wellemans' contract stipulated that he was to carve the model entirely in an Antique manner and avoid anything 'modern' (i.e. gothic). This change in style led to a disagreement with Vanden Eynde, who deemed the Antique model technically impossible to cast. On March 25th, 1522 Jan Gossart was requested to intervene in this matter and communicate with the two artists. Most likely his expertise in the Antique style and his close relationship with his patron Philip of Burgundy led to his role as judge in the dispute. Additionally, Gossart had already shown his expertise as a designer a few years earlier, since he received a payment of 40 guilders in 1520-21 for the delivery of cartoons for the choir stalls for the same church in Utrecht.²⁵⁸ For the construction of the wooden model a small workshop was installed by the carpenter Jan van Oey in one of the chapter houses. Both the root screen, and the choir stalls were never executed. In addition, Gossart was also commissioned to design the tomb monument for Isabella of Austria (1501-1526), to be executed by Jan de Smytere

²⁵⁵ Galand 2013, p. 76. This drawing was probably a copy of the designs made by Loys van Boghem and Hendrik de Pede one year earlier.

²⁵⁶ *Ibid.*

²⁵⁷ Muller 1881-82; Coster 1909; Dhanens 1985; Van Miegroet 2001; De Jonge 2002b, p. 22; Weidema & Koopstra 2012, doc. 19,20.

²⁵⁸ Coster 1909, p. 205; Vroom 1964; Alsteens 2010, p. 95-96; Weidema & Koopstra 2012, doc. 15.

(the teacher of Lucas d'Heere) and installed in the St Peter's abbey in Ghent in 1528 (fig. 2.23).²⁵⁹ In its stylistic innovations and Antique ornamentation the monument pays debt to the artistic language of both Conrad Meit and Jean Mone.

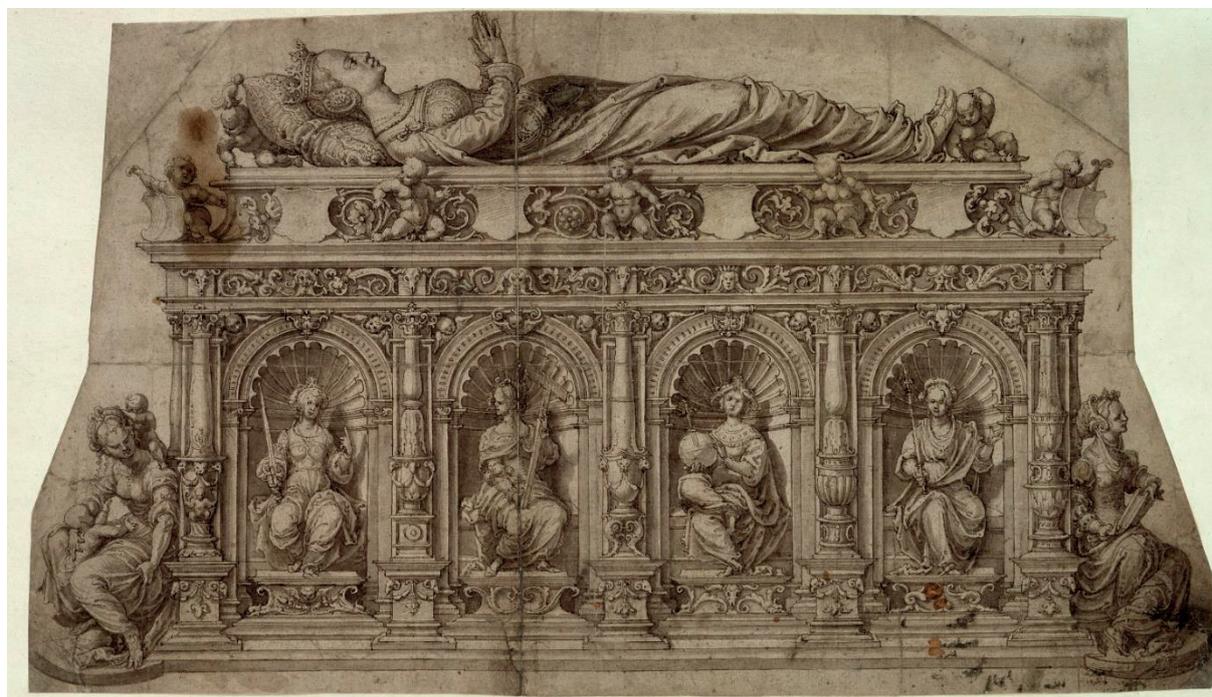


Fig. 2.23. Jan Gossaert, *Design for the tomb of Isabella of Austria*, 1526-27. Pen and brown ink, with grey wash on paper, 27,4 x 47 cm. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, Kdz. 4646. Photo: © Kupferstichkabinett Berlin.

Staying in Utrecht, Jan van Scorel (1495-1562) was involved in commissions for micro-architecture. In 1543 the renowned Utrecht painter was contracted to draw plans for a new wooden rood screen for the church of St. Mary - where van Scorel had been canon since 1528.²⁶⁰ The execution of the design in wood was left to the hands of the same Jan van Oey who had earlier assisted Jan Gossaert for the rood screen in St. Martin's chapel. At the same time, Van Scorel was involved in engineering works in which he was also assisted by Van Oey (see chapter 4). In 1553 the celebrated sculptor Colyn de Nole was also paid for sculpting the "beelden ende hoofden" for a chimney piece following the drawing of Jan van Scorel.²⁶¹

Another artist who is often considered as a sculptural and architectural advisor is the Bruges artist Lanceloot Blondeel (1498-1561). In 1525, after the construction of the Alderman's Chamber in the Brugse Vrije and following upon Charles V's coronation in Aachen and his triumphal entry into

²⁵⁹ Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. Kdz 4646. New York 2010, pp. 395-98, no. 108, with further literature. The monument was unfortunately destroyed during the 1566 Iconoclasm.

²⁶⁰ Van Hasselt 1883, pp.331-33; Hoogewerff 1912, p. 313; Van Tussenbroek 2013, p. 47.

²⁶¹ 'Colyn de Nole, beeltsnijder, betaalt die somme van een pont ende negen scellingen [...] aen de beelden ende hoofden, die aldaer duer ordonnantie van Mr. Johan van Scoerl, canonick sunte Marien gemaickt worden'. Ligtenberg 1918, p. 58; Casteels 1961, doc. 18.

Bruges in 1520, the magistrates decided to have a mantelpiece constructed in order to give the room more standing.²⁶² In January 1525 the commission was granted to the Bruges carpenter Willem Aerts, who was not only to execute the mantelpiece but also to deliver ‘the drawings and descriptions’.²⁶³ After a short period of financial setbacks, the project was relaunched in September 1528 and the 1525 design by the stonecutters was reconfirmed.²⁶⁴ In November 1528, however, new drawings for the mantelpiece were presented to the magistrates by Blondeel, and after some deliberation, his design were preferred over the previous ones by Aerts.²⁶⁵ This did not seem to be any cause of conflict between the competing designers since Aerts was still paid for advising during the construction of the mantelpiece and he even delivered additional moulds executed in lime stone.²⁶⁶ Although there is no account which provides us with an idea of what Aerts’ initial 1525 design may have looked like, it was probably more traditional and in line with other contemporary stately mantelpieces such as the one constructed in Kortrijk in 1525 which were less outspoken in their uses of Antique ornament.²⁶⁷ Like Gossart, also Blondeel was commissioned to design a funeral monument. A design for an epitaph for Margaret of Austria, dated at around 1551, which has been attributed to the Bruges painter, equally displays a profound knowledge of Antique ornament.²⁶⁸ Blondeel’s familiarity with novel ornamental motives had already been established in his painted oeuvre. In the *Triptych with Saints Cosmas and Damian* of 1523 the narrative scenes are structured and dominated by an elaborate golden framework in a well-balanced combination of modern gothic elements (akin to those used by the Keldermans dynasty or Loys van Boghem) and equally fashionable Antique ornament such as medallions, putti, garlands, candelabra pilasters or bucrania.²⁶⁹

Later in the century, in 1546, Michiel Coxcie was asked by the president of the Council of Brabant to deliver designs for a new consistory in the chancellery building where the jurisprudential meeting was to be held. For his efforts he was to be paid 5 guilders and 14 pennings (5 karolusgulden en 14 stuivers) upon delivery of the said design.²⁷⁰ This expense caused some protest by the Court of Audit, leading to the withdrawal of the proposal. In 1552 Coxcie received an architectural commission

²⁶² Devliegheer 1987, pp. 45-63; Kavalier 2018a.

²⁶³ ‘(...) datmen de galerye inde Burch inde stede vande oude vierschare make ende besteden zal naer den patroon ende descriptie die Jacob Dboom ande Willem Aerts steenbauwers daarof ghemaect hebben’. Devliegheer 1987, p. 24; Van Tussenbroek 2013, p. 47.

²⁶⁴ Devliegheer 1987, doc. 3.

²⁶⁵ Devliegheer 1987, doc. 5.

²⁶⁶ ‘Betaelt Jacob Dodekin ende Willem Aerts steenbauwers binnen Brugghe over (...) heurlieden advies gegheven up der concepten van den voosiden nieuwen cafkoene ende volghende dien daerof ghemaect in calsteenen twee patroonen’. Devliegheer 1987, doc. 8.

²⁶⁷ Debrabandere 1968, pp. 49-63; Kavalier 2018a, pp. 230-24.

²⁶⁸ Amsterdam, Rijksmuseum, RP-T-1953-343.

²⁶⁹ Bruges, St James church. Bautier 1910, pp. 14-17; Tahon 1998, p. 16.

²⁷⁰ ‘Meesteren michiel van coxyen schildere van zeker patroon by hem gemaict vander consistorie te maken inde cancelrie van Brabant om de rolle te houdene blyckende by-der ordonnantie van mynen heere den cancelier ende byder quytancie der voerscrenen meesteren michiels hier-mede overgegeven V karolusgulden XIV st. verbaelt in de naevolgende rekeninge f°13 ende alhier geroyeert’. Roobaert 2005a, pp. 169-70.

of a different nature. In order to accommodate the personal wishes of the Emperor, Mary of Hungary had to extend the Warande parc next to the Coudenberg palace by expropriating and demolishing several houses. Coxcie was ordered to deliver a “pourtraict au petits piedt” (i.e. a map on small scale) of the area.²⁷¹

Many other, now lesser-known painters were commissioned architectural designs. In 1541 a certain “Keyser den metser” was paid 2 Phillip guilders for delivering a design for the fortifications of Orthen gate in ‘s-Hertogenbosch. The drawing of these designs had been sub-commissioned by the mason to a local unnamed painter.²⁷² The fact that painters often functioned as an intermediary between commissioner and building master in order to make an aesthetic drawing is also hinted at in the earlier mentioned letter from the Haarlem master mason Michiel Heynrich to the king of Denmark.

2.4.1. “Up sijn antiecs”: *The Antique style as catalysator?*

Although some of the mentioned sources are an indication of a sense of continuity in the involvement of painters in the architectural design practice, there certainly is a noticeable increase in architectural commissions given to painters during the 16th century. Even when the quantitative difference may be a result of the availability of documented cases and survived sources, the qualitative increase is undeniable. The architectural, sculptural, and micro-architectural commissions received by painters are far more prestigious and often include commissions which involve high personal grandeur and public visibility such as Blondeel’s chimney piece in Bruges or Gossart’s tomb monument for Isabella. On the other hand, almost all the named examples are related to monumental sculptures and micro-architecture rather than building projects which align with our modern definition of architecture. It has been argued that one of the main reasons for the contribution of new professional players – and especially painters - to architectural design is the correlation of this process with the introduction and dissemination of the classical Vitruvian orders in the architectural language.²⁷³ Although this new architectural vocabulary was equally based upon a system of geometrical proportions, its geometrical system was more accessible than the gothic Ad Quadratum design practice. Indeed, some projects such as Gossart’s commissions or painters’ involvement in the decoration of festive ephemeral architectural portals and stages, seem to have been primarily instigated by the artists’ knowledge of Antique ornament. A knowledge of the new style became a highly valued asset in an increasingly competitive art market and by the 1520s specialized artists in the Antique style became more common. This is especially as can be noticed from the Antwerp Liggeren, where from 1529 onwards, the term

²⁷¹ Roobaert 2005a, p. 202, doc. 4.

²⁷² *Item betaelt Keyser den Metser, van dat hy vyt bevele vanden gecommiteerden, by eenen schilder heeft doen bewerpen tpatroen van den bolwerck, dwelk men voer die Orthenpoerte maken soude*. Van Zuijlen 1863, p. 575; Van Tussenbroek 2013, p. 47, n. 53.

²⁷³ See for example, Bork 2011b, pp. 411-35; Lang 2012.

Metselrnyder was gradually replaced by that of *Antiecsnyder*. The fact that many painters were able to experiment with the Antique style in their painted architectural phantasies, without the concern of structural, financial and technical limitations of real or micro-architecture, provided the painters between 1490 and 1530 with a slightly advantageous position over other craftsmen.²⁷⁴ This is what gave Gossart his advisory role as an expert in the Antique style in 1522, and probably played a decisive role in the appointment of Blondeel to design the Bruges chimney piece. However, there still is a considerable difference to be considered between thinking about imagined Antique spaces and constructible design that can be translated through measurable plans into feasible structures. Much more than a taste for Antique baluster columns and grotesque ornament, this required a fundamental understanding of geometric design principles.

2.4.2. *Distributing talent and strategic networking*

Of all the previously discussed craftsmen who had been involved in the design of architectural ornament and *metselry* (woodcarvers, goldsmiths, etc.) painters seem to have been the least qualified by their training. Even when their knowledge of new fashionable styles such as the Antique may have given them an advance on their colleague woodcarvers, goldsmiths, or sculptors, they may not have been aware of the specifications required to design at a time when architectural structures were strongly dependent on a profound knowledge of geometrical complexities used in ad quadratum design methods. Since many painters who had been involved in architectural commissions had equally been called upon for cartographic projects (see chapter 4), it remains difficult to uphold the idea that a wide-ranging versatility of design strictly related to their knowledge of the Antique style or to a rapidly changing art theoretical discourse. The answer to this question should more likely be sought in the prosopographical circumstances which allowed for a transfer of technical design knowledge from one professional or group to the next.

When looking at the social and professional backgrounds of those painters who were able to deliver a certain expertise in geometry and its applications (architecture and cartography), it is interesting to notice that many of them show a direct family connection to the professional group which had been involved in architectural design methods. The family roots of many of the painters who would largely determine the image of Netherlandish painting during the first half of the sixteenth century and who would receive sculptural and (micro-)architectural commissions, originated from a long family tradition of masons, wood carvers or goldsmiths. The list of early sixteenth-century

²⁷⁴ The concept of painter architectural structures will be further explored in chapter 5.

Netherlandish painters with similar family roots is lengthy and points towards an interpretive social pattern rather than individual coincidental cases. Lanceloot Blondeel was the son of a Bruges mason and probably started his own career in this trade. The Leuven painter and early engraver Jan Rombouts was the son of a slater (*schaliedekker*).²⁷⁵ The fact that he was referred to in documents as *Jan de Schaeldeker* might suggest that he may not always have been a painter but like Blondeel spent a few years of his life continuing his father's profession. Quinten Metsys, famously was son a Leuven family of smiths and master masons.²⁷⁶ Willem Key's (1519-1568) family roots lay with a renowned family of goldsmiths from Breda.²⁷⁷ Lambert Suavius (1510-1567), famous painter and engraver (and one of the members of the 1560 Antwerp town hall commission) was the son of the Liège goldsmith Henri Zutman (1460-1512), where he first received his training.²⁷⁸ Jan Gossart may have sprung from a family of retable carvers.²⁷⁹ Frans and Cornelis Floris came from a long family tradition of masons and stonecutters in Brussels and Antwerp which can be traced back to the late fourteenth century.²⁸⁰ The son of the celebrated sculptor and architect Jan d'Heere, was no other than the painter and art theorist Lucas the Heere. The Antwerp painters Gillis I and Gillis II Coignet were members of one of the most renowned families of goldsmiths, jewellers and instrument makers in the Low Countries.²⁸¹ Even Van der Weyden's earlier discussed architectural and sculptural interests may be explained by experience in other branches of craftsmanship since his father was registered as a cutler from Tournai; a craft closely associated with smiths.²⁸² These are not singular exceptional cases; instead they represent a more general prosopographical pattern.

2.4.3. Career strategies and talent distribution: Keldermans – Steynemolen – Coignet

The reasons for this development are strongly related to career opportunities within an ever increasingly competitive art market during the last half of the fifteenth century. Firstly, many families were distributing their knowledge and talent over a large professional network by strategic marriages and career planning. Whereas during most of the fifteenth century it was beneficial for families to keep their offspring within the same professional group (e.g., goldsmith sons would become goldsmiths), we notice a movement toward a strategic distribution of talent by the last quarter of that century. With its five generations in the building trade, the Keldermans (van Mansdale) family tree is a good

²⁷⁵ Bruijnen 2011, pp. 22-23.

²⁷⁶ Van Even 1870, pp. 315-319.

²⁷⁷ Jonckheere 2011, p. 15.

²⁷⁸ Helbig 1903, pp. 173-75.

²⁷⁹ See chapters 4.4. and 5.2.

²⁸⁰ Roggen & Withof 1942; Van de Velde 1975, pp. 21-22; Woouk 2018, p. 39.

²⁸¹ Meskens 1998b; Meskens & Van Helmedonck 2015-16.

²⁸² Destrée 1930, p. 37; De Vos 1999, pp. 47.

starting point to illustrate this phenomenon.²⁸³ The first two documented generations Jan I (ca. 1370-1425) and his son Jan II Keldermans (ca. 1390-1445) were primarily active as stone cutters, architectural advisors, and architects on major building sites. By the mid-fifteenth century, however we notice a diversification in professions with the children of Jan II. While the first and second son, Jan III and Andries I would continue their father's trade, Rombout I Keldermans (ca. 1425-1489) became mostly active as a designer of glass-stained windows. Even though the Keldermans family were becoming fierce players on the building market in the Low Countries, this distribution of family members over different guilds created privileged professional opportunities. Between 1469 and 1472, Rombout I Keldermans received a commission to deliver stained-glass windows to the town hall of Leuven. Since his father Jan was working as the official mason of the town hall (and St Peter's church) since 1439, and his elder brother Andries I (ca. 1415 – 1500) succeeded him in this position (together with Matheus de Layens), the choice for Rombout I to deliver the stained-glass became quite obvious.²⁸⁴ Rombout's other major commission, the delivery of stained-glass windows for the St Gumarus church in Lier (1475-1478) was possibly based on the same family relationship since Andries I had previously (1443) designed and delivered the stone tracery for these windows.²⁸⁵ Family connections with other craftsmen were also established through marriage contracts. Rombout's career change from stonecutter to glass painter was further consolidated through his marriage to Catharina (or Kathelijne) van Voshem (†1473), daughter to the Leuven painter Jan van Voshem. A second daughter of this painter (Elisabeth) was married to Dirk Bouts (1410-1475). This made Rombout I Keldermans the brother-in-law to the best-known painter of the city. Such ties were equally beneficial to other Keldermans family members: in 1478 Andries I Keldermans, together with his son Anthonis I Keldermans, would receive the commission to deliver the stone altar for the brotherhood of the Holy Sacrament on which Dirk Bouts' *Last Supper altarpiece* (1464) was to be placed. Rombout's daughter, Catharina Keldermans, would continue the glass-painter branch of the family by marrying Hendric van Diependaele (c. 1450-1509).²⁸⁶ He would also become one of the main suppliers of stained-glass windows for the Leuven town hall, while collaborating with his father-in-law.²⁸⁷ One generation later, a son of Mathijs I Keldermans, Hendrik Keldermans would be enrolled in the Antwerp Guild of St Luke in 1490 to start his career as a painter.²⁸⁸ Although little-known today, Hendrik may have had a lucrative career in Antwerp and Mechelen. He was also the owner of a tavern in Mechelen named the

²⁸³ Biographical data based upon Roggen & Withof 1944; Mosselvelde 1987, pp. 11-25

²⁸⁴ Roggen & Withof 1944, p. 146-47; Maesschalck & Viaene 1977; Mosselvelde 1987, 12-13. Mathijs I, Rombout's third brother was also active at the building site of the Leuven town hall since 1439.

²⁸⁵ Although there is a gap of 30 years, the dominant activity of the Keldermans family in the church's construction process may have provided with a choice for a member of the same family when commissioning the window.

²⁸⁶ Van Buyten 1998, p. 59.

²⁸⁷ Van Even 1895, p. 265.

²⁸⁸ Rombouts & Van Lerius 1864-76, vol. 1, p. 44.

“Golden head”, where he received Albrecht Dürer on the 6th of June 1521.²⁸⁹ (other, later members of the Keldermans dynasty will be further discussed in chapter 7.1).

Comparable in the context of the strategic diversification of social capital is the little-known Steynemolen family from Mechelen.²⁹⁰ Since the fifteenth century they had been a family of prosperous goldsmiths in the city. Godevaert II van Steynmolen (1458-1529), one of the most affluent goldsmiths of Mechelen, had his workshop in the Keizerstaat, just across the palace of Margaret of York and next to the newly built palace of Margaret of Austria.²⁹¹ This privileged location allowed him a network of clients among most of the Habsburg courts of Antoine de Lalaing, Henry III of Nassau and Prince-bishop Érard de la Marck (1472-1538), who all had their palaces in the same street. The children from his second marriage, Peter (1510-1558) and Jan Steynemolen (1518-1589) started a career as successful painters. The latter would continue a career as a painter in Naples.²⁹² The sons of both Peter and Jan would follow in their father’s footsteps, setting up painter’s workshops in Aragon. The sons who came from Godevaert II’s first marriage, Zeger and Godevaert III, continued the goldsmith business. Godevaert III’s children (Matheus and Cornelis Steynemolen) would start international careers as goldsmiths in Venice and at the court of Ferrrara, and Adrian van Steynemolen (1536-1576) would become one of the most successful art dealers in Valladolid, which was beneficial for the careers and network of his nephew painters working in the same region of Spain.²⁹³ As with the Keldermans family we notice how over three generations, career opportunities are created by a dense and influential family network spread over various branches of prosperous artistic activities.

A final example, which is comparable to the van Steynemolen family, is the Coignet family, whose family tree and network have recently been documented by Ad Meskens.²⁹⁴ Their fifteenth-century family roots go back to a family of which many members were silversmiths, goldsmiths, jewellers, and jewellery merchants in Antwerp and Mechelen. As was traditional, all the daughters of Christoffel I Coignet (1470 - c. 1554) would marry within a family of well-to-do goldsmiths, jewellers, or diamond cutters, while the sons would continue as goldsmiths or jewel merchants.²⁹⁵ In a second

²⁸⁹ ‘Ich bin zu Mechel zu Herberg gewest zum Guden Haupt bey maister Heinrich, mahler. Do haben mich zu Gast geladen jn meiner Herberg die mahler und bildhauer, haben mir Gross ehr gethan in ihrer versammlung’. Rupprich 1956, vol. 1, p. 173; Ashcroft 2017, vol. 1, p. 584. Perhaps Hendrik owed this prominent position in Mechelen and Antwerp to the high social position held by his far nephew Rombout II Keldermans.

²⁹⁰ Neeffs 1876, pp. 297-98; Monballieu 1978; Vanhelimont 2016, pp. 17-18.

²⁹¹ Van Doorslaer 1935, p. 122. He sold this property to Philip of Cleve in 1527.

²⁹² The emigration of Steynemolen to Napels, around 1562, was at the beginning of a much larger artistic exodus. Ca. 40 Netherlandish painters were active in Napels for at least a year, between 1570 and 1656. On this artistic migration to Napels, see Osnabrugge 2015.

²⁹³ Vanhelimont 2016, p. 23.

²⁹⁴ Meskens 1998b; Meskens & Van Hemeldonck 2015-16

²⁹⁵ Anthonis Coignet (Quignet) would be a silver and goldsmith dealing also in Breda and Goes. Anthonis’ son, Robrecht, would marry the daughter of the Brussels goldsmith Jan van Turnhout in 1568. Chistoffel II would

branch of the same family, stemming from the wealthy Antwerp silversmith Jacob I Coignet (before 1490-1528), we notice a larger diversification in career tracks. Although many of the family members would follow the traditional prosopographical pattern by continuing the father's trade or by marrying into a goldsmith's family, some chose differently. Margriet Coignet (1514 -?) married Wouter Key (active 1516-ca. 1540). Wouter was the son the Breda goldsmith Adriaen Key, and he and his younger brother Willem Key (1515-1568) would have successful careers as Antwerp painters.²⁹⁶ Where Gillis Coignet (1514-1562/63) would become one of the most prized manufacturers of astronomical instruments in the Low Countries, his eldest son with the same name (1542-1599) would be enrolled in Antwerp as a painter in 1561 and lead one of Antwerp's major paint workshops during the second half of the century.²⁹⁷ In 1584 he became dean of the Guild of St Luke.²⁹⁸ Gillis Coignet's younger brother Michiel (1549-1623) would continue his father's expertise as an astrological and navigational instrument maker, while also authoring a treatises on mathematics and navigation.²⁹⁹ In 1596 he entered into the service of the Habsburg court, as a mathematician and engineer to Archduke Albert. In this function he made several new drawings of the Antwerp fortifications, thus applying his geometrical knowledge to engineering and cartography.³⁰⁰ Michiel's sons, Michiel II and Gillis II, would also endeavour careers as painters.

These and many similar cases illustrate how the strategic distribution of family occupations would create mutual job opportunities. Young painters could often benefit from the high-profile networks established by their goldsmith family members. The career path of a painter was thus never an arbitrary choice, but a well-considered decision in which as little risks as possible were taken. For the families of goldsmiths or master masons this did not necessarily affect the often-cherished family tradition or built-up expertise since the eldest son was still most likely to follow in his father's footsteps. In addition, family ties with other influential families in the trade were maintained through traditional marriage strategies. It did provide a tremendous diversification of family members over various crafts and within different guilds, thus enlarging the impact on social and corporate urban structures.

become a jewel merchant in Germany and Italy and his children would succeed him in this profession. Anna would marry Peter de Weent, one of the most important goldsmiths of Antwerp. Katlijne would be wed to François Messing, a diamond cutter from Bergen-op-Zoom. See Meskens & Van Hemeldonck 2015-16, pp. 78-83.

²⁹⁶ Tillemans 1979-80; Jonckheere 2011, pp. 15. Adriaen's first son, Michael, continued the goldsmith trade in Breda.

²⁹⁷ On Gillis Coignet sr. the instrument maker, see Meskens 1998b, pp.23-30; Meskens & Van Hemeldonck 2015-16, pp. 87-88. On Gillis I Coignet the painter, see Van Buyten 2001; Meskens 1998b, pp. 31-51; Uppenkamp 2015; Meskens & Van Hemeldonck 2015-16, pp. 89-93.

²⁹⁸ Rombouts & Van Lerijs 1864-76, vol. 1, p. 184. In 1589, Gillis Coignet moved to Amsterdam, probably due to Lutheran sympathies. According to Van Mander, it was Coignet who had persuaded Hans Vredeman de Vries to move to Amsterdam. Eventually he moved to Hamburg in 1594, where he died on 27 October 1599.

²⁹⁹ Van Cleempoel 2002, p. 70; Meskens & Van Hemeldonck 2015-16, pp. 93-95.

³⁰⁰ Meskens 1998b, pp. 116-17.

A second decisive element in the fact that many mason's and goldsmith's sons altered from their professional family tradition may have been more pragmatic. It is no coincidence that this socio-professional pattern concurs with the sudden growth and opening of the market for paintings on an international scale. Especially in Antwerp, where an open market was created with the establishment of the Dominican *Pand* (1445-1553) and Our Lady's *Pand*, painters were no longer dependent on individual commissions of clergy, nobility or urban upper classes, but were at liberty to sell and export their works.³⁰¹ The expansion of the Antwerp market for paintings as a middle-class luxury product is a well-studied phenomenon and slightly confirms the general image forwarded by Ludovico Guicciardini of at least 300 active painter's workshops in Antwerp by the 1560s.³⁰² Quantitative research on the enrolment in the Guild of St Luke of Antwerp indicated that the number of painters who became a free master increased tremendously in comparison to other professional groups which numbers remained stable.³⁰³ Between 1547 and 1564 a total number of 149 painters were registered as free masters, in comparison to 10 silversmiths or 16 sculptors.³⁰⁴ Other than the building market, where the major building sites were led by an increasingly exclusive network which existed of a handful of professional designers, and other than the goldsmith trade which required a considerable initial investment for the raw material, the paint market had suddenly become more accessible and spread with opportunities (at least during the first quarter of the century). In the fifteenth century we still notice that a painter and miniaturist such as Lieven van Lathem used his social position and connections to the Burgundian court to provide his first son Lieven II a successful career as goldsmith to the court of Philip the Fair and the young Charles V.³⁰⁵ Between 1466 and 1500 the first names of goldsmith sons were already registered in the Bruges guild of St Luke.³⁰⁶ It is a trend that would be continued and increase during the first decades of the following century. The influx of new apprentices, coming from a workshop environment in which geometrical, and arithmetical thinking were fundamental skills in the design and drawing practice would dramatically alter the professional skillset of this new generation of painters, along with their professional status (as will be discussed in Part III).

³⁰¹ Ewing 1990; Honig 1998; Vermeylen 2000; Vermeylen 2003.

³⁰² Guicciardini 1567, p. 168.

³⁰³ Martens & Peeters 2007, pp. 214-15.

³⁰⁴ These numbers, however, do not consider the fact that many silversmiths may have been enlisted within the guild of St Eloy, along with goldsmiths. For the Antwerp goldsmith guild particularly, see Van Hemeldonck 1999.

³⁰⁵ On the Van Lathem family, see London & Los Angeles 2003, pp. 239-42; Roobaert 2015, vol. 2, pp. 207-16.

³⁰⁶ Martens 1999, p. 398.

2.5. Conclusive case-study: The Leuven St.-Peter project and the Metsys family



Fig. 2.24. Matheus de Layens or Gielys Stuerbout, *Elevation for west tower St Peter's church Leuven* (before failed restoration), ca. 1481. Pen and black ink on parchment, 180 x 61 cm. Leuven, Museum M, inv. LP/928. Photo: © KIK-IRPA and Bruno Vandermeulen.

The ambitious building project for the west tower of St Peter's church in Leuven and the involved artists provides a good case study to illustrate both the design responsibilities and the professional shifts. Contemporary to the spire projects of Antwerp and Mechelen, the proposal for a new gothic west tower of the Leuven St Peter's church was to put all other projects in its shadow with a spire that would reach a total height of 143 meters. After a fire had burned down the old Romanesque west-tower in 1458, the city architect and building master Matheus De Layens was asked to deliver designs for a new gothic tower.³⁰⁷ In 1481, more than twenty years after the first commission, the Leuven painter Gielys Stuerbout (active 1481-1497) was paid to deliver a new design for the west towers. This drawing was to be made on (or attached to) a wooden board, which had to be displayed in the church, as was common with a presentation drawing.³⁰⁸ A carpenter was paid to glue together two pieces of wood for this intended purpose. Most likely this design was not unlike contemporary painted "church portraits" such as those that are still preserved for Our-Lady-over-the-Dyle in Mechelen (ca. 1530), St Bavo in Haarlem (1518), St Martin's in Zaltbommel (1538) or St Peter in Leiden (1512).³⁰⁹ These church portraits were often addressed to the churchgoers to raise awareness and funds for the planned works, as was often explicitly mentioned in the text which accompanied these painted boards. In the same 1481 church account another payment was made to Hubert I Stuerbout (active 1454-1484), city painter of Leuven and father to the earlier mentioned Gielys, to deliver a painted design

³⁰⁷ *Meester Mathense de Layens, van den beworpe te makene van den groeten torre achter Sint-Peters kercke*. See, Doperé 1998, p. 324. SAL, 5105, fol. 129.

³⁰⁸ *Item, meester Gielys Stuerbout van en betrecke te beworpene van den drie torren die ghemaect sullen worden op 't fondersel dat ghemaect es voer den mommaert duere, dwelck ghemaect ende beworpen es op een berd, hangende in de kercke Sincte-Peters, hem vergouwen, voer sijnen arbeit, 3 gulden*. SAL, 5086, fol. 97.

³⁰⁹ Helmus 2010, pp. 126-27; Tussenbroek 2013, pp. 65-67; Hurx 2018, pp. 281-83.

on paper for the building project.³¹⁰ An architectural drawing on parchment for this west tower project is usually associated with these three payments (fig. 2.24).³¹¹ The drawing shows the elevation of the facade, with two alternative construction options on each side.³¹² The clearest difference between the left and right side of the drawing is the level of detail in the late gothic ornamentation. While the right-hand side provides the viewer with an array of baldachin, blind tracery and pinnacle, the left-hand side is drawn more moderate and sober focussing only on the essential constructive elements. This is because the opposite side could be mirrored. This also hints towards the envisioned audience of this drawing as the workmen active on the construction site or the church patrons who were given a general idea of the project. Additionally, the south tower (right side) is depicted with an openwork spire, such as was popularised throughout Europe since the construction of the Freiburg west tower, and which had also been applied by Jan van Ruysbroeck on the nearby church of St Gertrude in Leuven (1453).³¹³ The focus of the drawing is on the upper levels of the project, as the central bay above the main church portal is only filled-in with a rudimental square bared window. This has been explained as the pre-existing Romanesque west-work which had been integrated into the new gothic project.³¹⁴ Another possibility is that the tracery windows for this section were yet to be designed and individual detail drawings were to be delivered. Since the drawings by the Stuerbouts mentioned in the 1481 contracts are described as being on paper or wooden boards, the present drawing is more likely identifiable as an earlier presentation drawing, possibly one made by De Layens.³¹⁵ Nonetheless, in our present analysis of the responsibility and transmutability of architectural design techniques within the Netherlandish design practice it is interesting to notice that the Leuven city painters were asked to transmit the technical drawing into a drawing which was more accessible to a wider audience. In terms of family- and guild networks, the Stuerbout family had close ties to the building site of St Peter's and the Leuven artistic milieu. Hubert Stuerbout is also frequently mentioned together with Dirk Bouts in city payments for minor decorative painting commissions.³¹⁶

³¹⁰ 'Item, meester Houbrecht de schildere van den patroone van den torre te scildene, op pampier, hem vergouwen 27 pl.'. SAL, 5086, fol. 97.

³¹¹ Leuven, Museum M, inv. LP/928. Due to a tragic restauration campaign during the 1950s, the parchment of the drawing has been heavily damaged and is now only preserved in a hardly legible, fragmentary condition.

³¹² Doperé 1998, pp. 322-24; Bral 2004, pp. 151-52; Bork 2011b, p. 400; Böker 2013, pp. 355-56, no. 130; Hurx 2018, pp. 254-55.

³¹³ On the openwork spire in Late Gothic architecture, see Bork 2003.

³¹⁴ Wilson 1990, p.246; Doperé 1998, p. 324; Hurx 2018, p. 255

³¹⁵ Doperé 1998, p. 324; Bral 2004, p. 151.

³¹⁶ Van Buyten 1975, p. 153; Van Buyten 1998, p. 65.



Fig. 2.25. Joos II Metsys, *Elevation for west tower St Peter's church Leuven*, ca. 1505-1526. Pen and brown ink with brown wash on parchment, 176 x 82 cm. Leuven, Museum M, inv. LP/927. Photo: © www.lukasweb.be – Art in Flanders, Dominique Provoost.

A second drawing depicts a more elaborate and updated version of the previous plan (fig. 2.25).³¹⁷ This elevation drawing on five pieces of parchment is mentioned in a document of 1526, where it is stated that a new drawing had been commissioned to master Joos (II) Metsys.³¹⁸ The drawing was to inform the workers on how to proceed with the building project of the tower façade. It shows a greater amount of ornamental detail than its fifteenth-century predecessor and opts for more modern options in the tracery patterns. In comparison to similar gothic elevation from German and Austrian building sites, this plan shows an increased use of subtle perspectival depth cues and even includes anecdotal details such as the trumpet player atop the central spire. In his analysis of the drawing's underlying geometrical grid, Robert Bork concludes that although similar geometrical figures such as squares, triangles and octagons were applied to structure and proportion the individual architectural components, this geometrical rigidity is somewhat given up when rendering the upper sections of the drawing.³¹⁹ Where the robust five-storey lower sections alter into the more lighter triple-towers, we notice a slightly uncanny transformation from a more or less orthogonal geometrical structure towards looser and illusionistic perspectival experiments.

In some way this combination of traditional gothic design techniques with a hesitating application of linear painterly perspective also reflects the family dynamics of the draughtsman. Although lacking the long family tradition in the building trade such as members of the Keldermans family, Joos' father who was similarly named Joos (? – 1482) had come to

³¹⁷ Leuven, Museum M, inv. LP/927.

³¹⁸ *'voir 't maken van 't patroen van denselven toren, welck seer beoefflyck wesen soude van den gebeelen wercke te hebben, op dat men dairna in toecomende tyde soude moegen weten te werckene, ende d'welck hij tot hiertoe gemaect hadde'*. See Crab 1977, pp. 332-33, doc. 33; Bral 2004, p. 161.

³¹⁹ Bork 2011b, pp. 400-10. It remains unclear what the dry lines or compass points were which instructed Bork in the analysis of the geometrical grid behind this drawing. For example, he positions the centre of a circle (which is to serve the octagonal structure of the first three storeys) at the centre of the main tracery window just above the main portal, while no prick points or dry compass lines are discernible on the actual drawing.

Leuven some time before 1460 as a locksmith, iron smith and probably also as a clockmaker.³²⁰ Here, he enjoyed a rather prominent position as he was appointed as guardian of the chapel of the Leuven goldsmith guild, devoted to St Eloy.³²¹ The corporate social network of Joos I Metsys was influential to both his own career as that of his sons Joos and Quinten. In 1469 he was commissioned by the wardens of the chapel of the Holy Sacrament to deliver the locks to the two wings of Dirk Bouts' Last Supper; the same project for which Anthonis I Keldermans had delivered the stone base a year earlier.³²² In 1473 he was appointed as the city's locksmith and it was in this function that he joined the city's master mason Matheus de Layens, the city's sculptor Joos Beyaert and city's painter Hubert I Stuerbout in the yearly procession of the Holy Sacrament.³²³ His collaborations with the city officials and De Layens on several projects, probably influenced the appointment of his eldest son Joos II as the new master of the works at the prestigious building site of St Peter's in 1499. At the time of his father's death, in 1482, Joos II was already finishing his father's commissions as an iron smith for an iron choir screen for a chapel in the choir of St Peter's.³²⁴ Joos II would also be strongly embedded within the socio-professional environment of Leuven smiths and locksmith through his marriage with Christina van Pullaer, daughter of the prosperous locksmith Jacob Pullaer (? -1514). This strategic family networking would continue when Joos's daughter was wed to Jan IV Beyaert (Van den Borne), member of a family with a long tradition as Leuven sculptors and wood carvers, reaching back to at least the late fourteenth

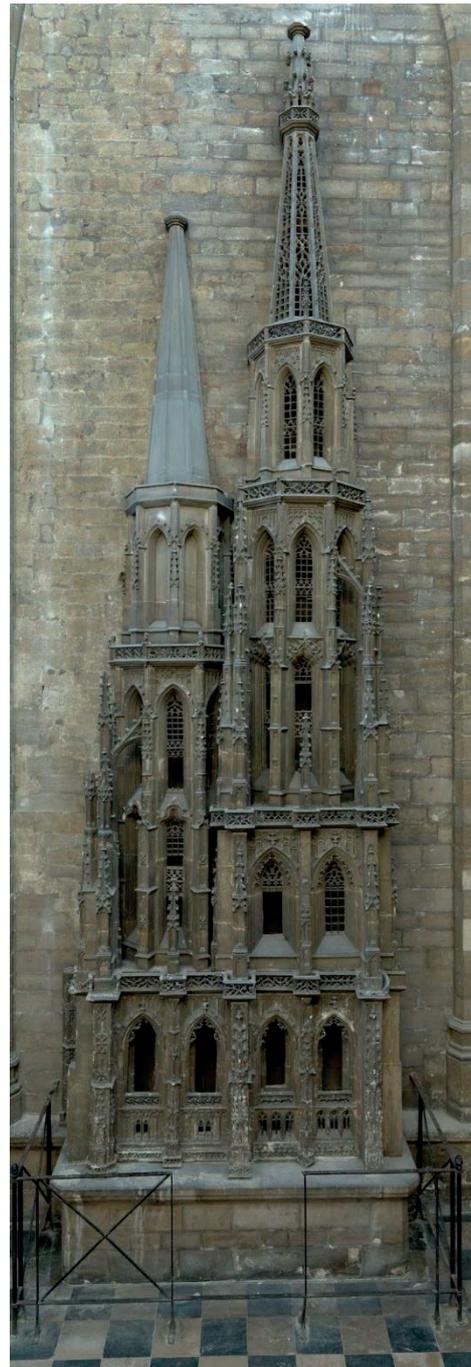


Fig. 2.26. Joos II Metsys and Joos Beyaert, *Model for west tower St Peter's church Leuven*, ca. 1524-30. Avesne Limestone, 827 x 246,5 x 80 cm. Leuven, St. Peter's church (Collection Museum M), inv. B/VI/247. Photo: © www.lukasweb.be – Art in Flanders, Dominique Provoost.

³²⁰ On Joos I Metsys, see Van Buyten 2004, pp. 31-38.

³²¹ Van Even 1870, p. 326; Van Buyten 2004, p. 37.

³²² *Item, betaelt meester Joes van enen sloete aen ons taefele, 29 stuivers!*. Van Even 1870, p. 165, n. 3.

³²³ Van Buyten 2004, p. 36.

³²⁴ The commission contract was already written in 1476, in which it was stated that Joos I Metsys was to make these choir screens after a pre-existing design. This may suggest that his drawing skills may have been inferior to those of his two sons. Joos II Metsys completed this commission only in 1488. Van Even 1870, pp. 328-29.

century.³²⁵ It was with his son-in-law that Joos II Metsys agreed to deliver a stone model of for the west towers project (fig. 2.26).³²⁶ Although many other commissions for stone or wooden models were made, the model made by Beyaert and Metsys is the only surviving example of this indubitable standard part of the Netherlandish architectural design process.³²⁷ With its height over more than 8 meters and the choice for the delicate and precious white Avesnes limestone the project exceeded the efforts and costs which normally went into the production of architectural models. As a detailed miniature version of the west-towers it had more in common with micro-architectural projects such as De Layens' highly esteemed sacrament house for the same church, than with contemporary models such as the papier-mâché version for the St Maclou at Rouen or the many payments found for wooden models.³²⁸ However, the model was not merely made to impress the church wardens and church goers but, as the contract explicitly states, to instruct the workers in order to safeguard the construction process if the aged Metsys were to decease. Like other architectural drawings, the model offered a variety of design options and provided again some alternatives on the tracery and decorative motives.³²⁹

A well-documented case such as that of Leuven's St Peter's not only illustrates how major building projects could bring together architectural designers of a great variety of crafts and even guilds and disseminate geometrical design know-how, but also how it functioned as an urban networking environment where strong alliances were made which could serve certain families over many generations. It is also noteworthy to consider the role of the Leuven design project in connection with the career of Quinten, who would become the most famous offspring of the Metsys family. Although we have no records of any formal training at a painter's workshop either in Leuven or Antwerp, the family tradition of designing and drawing architecture must have strongly influenced his artistic conception. In 1491, Quinten Metsys first appears as a painter in the records, without any mention of him having served an apprenticeship with an Antwerp painter.³³⁰ Although a formal training period in the workshop of Bouts has been suggested, his experience as an architectural draftsman in his father's or brother's workshop would have allowed him the skillset to enter the guild as a painter's journeyman or to enrol as a free master. This would be analogous to the career move of Blondeel from architecture to painting. Although no architectural commissions can be associated with Quinten Metsys,

³²⁵ Van Even 1870; Crab 1977, 164-73, doc. 14; Smeyers 1979, pp. 59-61.

³²⁶ Briggs 1931a, pp. 123-24; Doperé 1998, pp. 323-26; Bral 2004, pp. 155-57; Hurx & Ottenheym 2015, pp. 225-27; Hurx 2018, pp. 296-97.

³²⁷ On other architectural models in the Low Countries, see Hurx & Ottenheym 2015; Hurx 2018, pp. 294-97.

³²⁸ Briggs 1931b, p. 174-79; Lafond 1974; Guillaume 2015, p. 121.

³²⁹ For a comparison between the model and the Metsys drawing, see Hurx & Ottenheym 2015, pp. 226-27

³³⁰ Rombouts & Van Lerius 1864-76, vol. 1, p. 43.

architecture remains a constant presence throughout his oeuvre.³³¹ Not unlike the earlier discussed cases of de van Steynemolen or Coignet families, older liaisons and reputations established through the traditional family trades provided career opportunities for the new generation of painters in the family. It is probably no coincidence that the earliest documented and most career-defining work of Quinten's career, the St Anne Altarpiece of 1509, was commissioned by the confraternity of St-Anne for the same church where his brother had been the master of the works for about ten years (fig. 2.27).³³²



Fig. 2.27. Quinten Metsys, *St Anna Altarpiece*, 1509. Oil on oak, 224 x 219 cm (central panel), 220 x 92 cm (wings). Brussels, Royal Museum of Fine Arts, inv. 2784. Photo: © KMSKB, Johan Geleyns.

The painted architecture is a showcase of the painter's brother's architectural design knowledge; both *modern* as *antiecs*. The central panel showing the intimate scene of the infant Christ with his mother and grandmother is set in a cupola structure which reminds of Lombardian Renaissance innovations. The cupola with its two coffered barrel-vaults on each side not only divides the visual plane, but also makes reference to the most novel and innovative architectural inventions of its time. Both Perugino and Cima de Conegliano have been suggested as possible visual sources for Metsys' architectural tour-de-force.³³³ Equally interesting, and perhaps even more telling for Quinten's architectural upbringing, is the inclusion of a modern gothic spire on the left outer panel where the Offer of St Joachim is depicted (fig. 2.28). The spire with its octagonal upper storeys with open buttresses strongly reflects the designs for the northern tower of Antwerp's church of Our-Lady or St Rombuld's tower of

³³¹ The festive decorations for the Joyous Entry of Charles V, on the 3rd of April 1520, probably come the closest to actual architectural design commissions of Quinten Metsys. The Erasmian iconographic program for this event was devised by Metsys' humanist connection, Pieter Gillis. Silver 1984, pp. 14-15; Van Buyten 2004, p. 53; Neumann 2017.

³³² Brussels, Royal Museum of Fine Arts Belgium, inv. 2784. De Bosque 1975, pp. 92-100; Silver 1984, pp. 35-45, 199-204; Slachmuylders 2004, pp. 85-120.

³³³ Broadley 1961, p. 105; De Bosque 1975, p. 95; Silver 1984, pp. 36-7, 202-03; Wood 1989, pp.14-15.

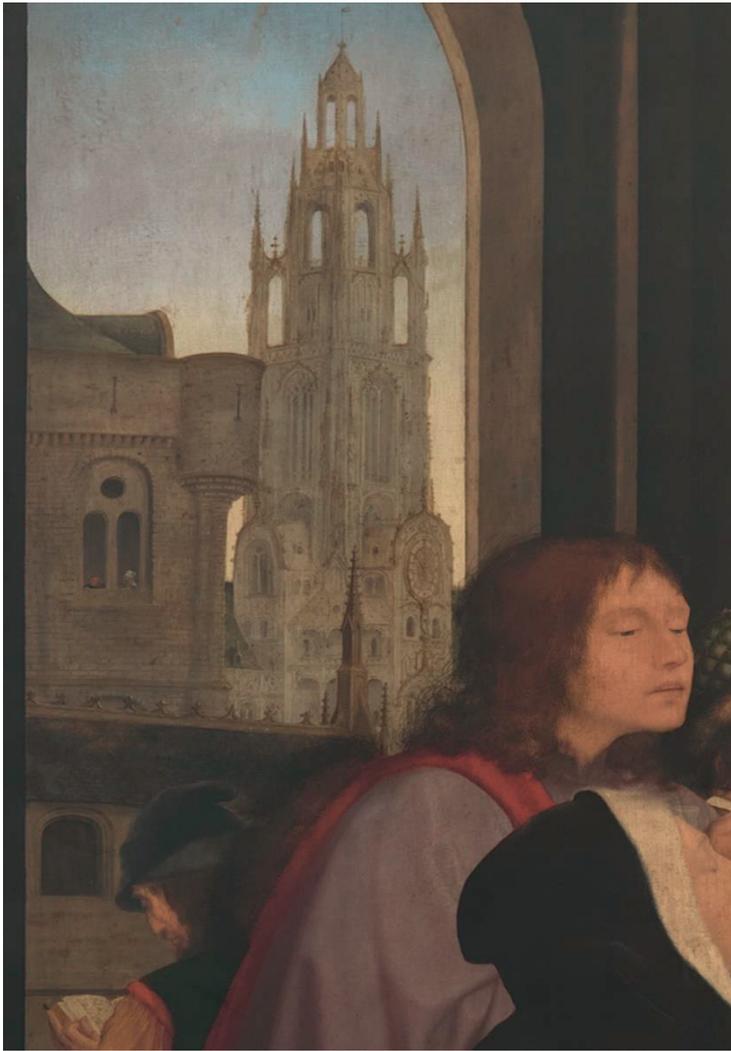


Fig. 2.28. Quinten Metsys, *St Anna Altarpiece* (detail outer left wing), 1509. Oil on oak. Brussels, Royal Museum of Fine Arts, inv. 2784. Photo: © KMSKB, Johan Geleyns – Art Photography.

Mechelen, designed by Domien de Waghemakere and Rombout II Keldermans respectively. Although the Antwerp tower would only be completed until 1518 and the Mechelen project would never reach completion, their plans must have been drawn well before the completion of Quinten Metsys' triptych. Joos II Metsys was part of a close-knit network of architectural designers in the Low Countries who were frequently commissioned to inspect (*visiteren*) each other's designs and to offer professional advice (see chapter 2.2) . It seems reasonable that Quinten's brother was not only able to provide a helping hand with obtaining the commission but was also able to offer insight in the most novel building projects. Other works in the oeuvre of the famous Antwerp

painter betray dependence on his architectural training. In the *Virgin and Child Enthroned* (fig. 2.29), dated around the same period as the *St Anne Altarpiece*, the divine titular characters are seated against the background of a golden throne with gothic tracery which may not just be generic decoration but seems to echo the specific window tracery on Joos II Metsys's parchment and limestone designs (fig. 2.30).³³⁴ The rigid linearity and the absence of dept in the golden tracery (particularly in comparison to his later works or, for instance, Gossart's *Deesis*), strongly reflect the influence of a more orthogonal drawing method which still may have determined his architectural projections. Ironically, while the upper storeys of Joos' architectural drawing show experiments with perspective which may have been influenced by his brother's painting career, Quinten's early architectural representations stand in a close relationship with his family tradition. It is perhaps a perfect example of the cross-fertilisation of

³³⁴ London, National Gallery, inv. NG6282. De Bosque 1975, pp. 106-07; Silver 1984, pp. 194-95, no. 1.

both drawing traditions which were to change the skillset of a painter's workshop for this generation. This is also strongly reflected in the Amsterdam sketchbook from the workshop of Jacob Cornelisz. Van Oostanen, as will be analysed in the following chapter.



Fig. 2.29. Quinten Metsys, *The Virgin and Child enthroned* (detail), c. 1506-1509. Oil on oak, 62,3 x 43,5 cm. London, National Gallery, inv. NG6282. Photo: © National Gallery.



Fig. 2.30. Detail of fig. 2.25 (left bay, second level).

3. The Amsterdam Sketchbook (1520-33): Geometrical and architectural knowledge in a painter's workshop

The collection of the Berlin Kupferstichkabinett holds a unique sketchbook which allows us to catch a glimpse of the designing skills in early modern Netherlandish painter's workshops.³³⁵ The sketchbook, which contains 51 sheets divided over forty-eight album pages, has been associated to the workshop of the Amsterdam painter and designer of woodcuts Jacob Cornelisz. van Oostanen (c. 1472 – 1533).³³⁶ Most probably the sketchbook is the work of a pupil or workshop assistant active in the workshop between 1520 and 1533.³³⁷ Recently, Daantje Meuwissen suggested that Van Oostanen's grandson Cornelis Anthonisz. (c. 1505 – 1553) may have been the pupil responsible for the sketchbook, since some of the drawings seem to have been preparatory studies for the latter's *Bird's-eye View of Amsterdam*, (see chapter 4).³³⁸ Although loose sheet sketches have been preserved of Netherlandish workshops, the Amsterdam sketchbook counts as one of the earliest surviving, largely intact, Netherlandish sketchbooks.³³⁹ The Amsterdam sketchbook combines preparatory sketches with the building up of a visual repertoire to be used within the workshop practice, and can thus be positioned in between a sketchbook and a model-book.³⁴⁰ The sketchbook is not only important in the context of its figurative studies and models in relationship to the painted works related to Van Oostanen and Anthonisz., but it also allows for an understanding of the architectural knowledge and the importance of geometrical design principles introduced in a Netherlandish workshop during the first quarter of the sixteenth-century. About 40 % of the individual drawings in sketchbook are related to architecture and geometry, ranging from exercises in linear perspective to designs for fashionable architectural gothic and mostly Antique ornament.

³³⁵ Staatliche Museen zu Berlin, Kupferstichkabinett, Kdz 79 C 2a. The sketchbook was recently published in a critical facsimile edition by Van Tuinen 2014.

³³⁶ Steinbart 1929, p. 31-34; Friedländer 1967-76, vol. 12, p. 60; Carroll 1987, pp. 13-16, 327-333; Meuwissen 2017.

³³⁷ The sketchbook was traditionally dated 1523-26 by Steinbart 1929. More recently, after a technical examination of the booklet, Ilona Van Tuinen proposed a broader approximate dating of about 1520-35. This dating is based upon both inscribed dates on some of the folio's and from some of the drawings which record Jacob's signed and dated paintings such as the *All-Saints Altarpiece* of 1523 in Kassel and the 1526 *Virgin and Child* in Stuttgart. Van Tuinen 2017, p. 58.

³³⁸ Meuwissen 2014a; Meuwissen 2017.

³³⁹ Somewhat contemporary are the so-called Antwerp sketchbook (Berlin, Kupferstichkabinett, inv. no. 79 C 2) and the so-called Errera Sketchbook (Brussels, Royal Library Print Room inv. 4630), attributed to an artist in the environment of Henri met de Bles and containing a series of figurative models such as views on Antwerp or motifs related to the oeuvre of Hieronymus Bosch. For these sketchbooks, see Bevers 1998; Wood 1998; Van Heesch 2019. To avoid any confusion with the Antwerp sketchbook, also preserved in Berlin, we will further refer to the sketchbook of the Van Oostanen workshop as "the Amsterdam sketchbook".

³⁴⁰ On the use of sketchbooks in Medieval and early modern workshop practice, see Scheller 1995, pp. 62-69. On the distinction between sketchbooks and model-books, see Elen 2012.

3.1. The Jacob Cornelisz. Van Oostsanen workshop

Due to a scarcity of sources, common to early Netherlandish painters, Jacob Van Oostsanen's factual biography is a short one.³⁴¹ The artist was born in Oostzaan between 1460 and 1465.³⁴² Oostzaan a small farming village, north of Amsterdam, without any significant cultural value which leads Van Mander to conclude that he was born as a farmer's son. Little is known about the painter's training and apprenticeship. Jane Carroll suggests that the linear pattering of his woodcut designs points towards the goldsmith profession, which could have financed the artist's youthful acquisitions.³⁴³ More convincing is the recent suggestion by Huigen Leeftang, that he may have started his artistic career as a woodcarver, which explains the fact that his printed output was strictly limited to the production of woodcuts.³⁴⁴ The first archival information concerning Van Oostsanen was the birth of his son in Amsterdam in 1498 and the purchase of a large dwelling in the Kalverstraat in 1500, which suggests that he was already a prosperous artist at that time.³⁴⁵ During his thriving career in Amsterdam he was responsible for woodcuts³⁴⁶, large-scale ceiling paintings in the Great church of St Lawrence in Alkmaar, stained glass designs, large altarpieces and portraits. His patrons included many of the wealthy urban middle-class of Amsterdam and the county of Holland. According to Van Mander, Van Oostsanen became the second teacher of Jan van Scorel in 1512, who assisted his master on some of the landscapes.³⁴⁷ Other students included family members, such as his sons Dirck and Cornelis, and his nephew Cornelis II Buys. Despite having been described as 'not able to understand the new stylistic language of Renaissance'³⁴⁸, his oeuvre proves him to be particularly receptive to a wide range of ornamental innovations at a very early stage in his career.³⁴⁹ The Amsterdam sketchbook is perhaps the best indication of the popularity of Antique ornament and knowledge of geometrical design techniques in early Netherlandish workshops during the first quarter of the sixteenth century.

³⁴¹ For the most complete biographical overview, see Bleyerveld 2019, pp. xi-lv.

³⁴² Dubiez 1969; Dudok Van Heel 2011; Dudok van Heel 2014; Meuwissen 2014b, p. 93.

³⁴³ Carroll 1987, p. 9.

³⁴⁴ Leeftang 2014, pp. 128-30.

³⁴⁵ Carroll 1987, p. 8.

³⁴⁶ Veldman 2011; Leeftang 2014.

³⁴⁷ Van Mander 1604, fol. 234v.

³⁴⁸ Amsterdam 1986, vol. 1, p. 131.

³⁴⁹ A good example is his *Adoration Triptych* in the Rijksmuseum of Amsterdam, dated 1517. Here he shows an early and clear understanding of candelabra ornament in the depicted pilasters and architraves, by combining playing putti, dolphin ornament and friezes of vines.

3.2. Practicing the Antique

The sketchbook functions almost as a sample catalogue of the available repertoire of Antique ornament that could be found in the oeuvres of Netherlandish painters by the mid- and late 1520s. Fol. 1v. shows a wide variation of Antique-styled ornament, starting on the upper left side of the sheet with a bulging base adorned with bucrania holding garlands (fig. 3.1).³⁵⁰ Whether the neighbouring capital on the sheet is intended to be placed on top of the described base is uncertain, yet its Antique style with dolphin-decoration makes it plausible. The lower half of the sheet is filled with variations on candelabra ornament. One of the most important sources for these candelabra ornaments by Netherlandish artists were the individual ornament prints by Giovanni Antonio da Brescia and Agostino Veneziano, which entered the European print market by the late 1490s. Also interesting is what seems to be an inverted cross-section of a Doric base, as it was represented in Cesare Cesariano's 1521 Vitruvius edition or on loose sheet prints such as the engravings of a base in the Ionic or Corinthian order by the anonymous Italian engraver Monogamist G.A with the Caltrop (on the role loose sheet prints, see also Chapters 5 and 6).³⁵¹ A similar cross-section is found on the verso side of the next folio (fol. 2v), be it of a less distinct classical order. One of the most spectacular Antique architectural designs in the booklet is doubtlessly found on fol. 13v (fig. 3.2). A decorative frieze with winged heads of putti is supported by an Antique pilaster with a voluptuously ornamented capital with dolphins, palmets and mascarons flanking an early example of a scrollwork cartouche. The latter is inscribed with the year 1523, making it one of the few dated sheets in the sketchbook. Linking the frieze and the pilaster is an elegant console with volute-shaped foliage. The whole structure of frieze and console seemingly hovers on top of the capital, and perhaps an archivolt with triglyphs and metopes was intended to connect both architectural elements.³⁵²

A comparable sheet of an architectural study is a column drawing on fol. 32r (fig. 3.3). A square sturdy column with rounded colonnettes on each corner supports a capital which makes use of a similar repertoire of ornaments (be it in a different order). A foliage ornament is now flanked by scrollwork which evolves into dolphin heads. At the base of the capital, two S-shaped volutes finish the architectural composition. In its robustness and stacking of different ornamental motives and architectural elements, this painted architecture is strongly reminiscent to the architectural compositions developed in the painted settings of Bernard van Orley and contemporary painters

³⁵⁰ Recently the original order of the folios has been re-examined and reconstructed by Van Tuinen, which led to some alterations in the original sheet sequence, see Van Tuinen 2017. To avoid confusion, the foliage mentioned in this chapter follows the facsimile publication of the sketchbook by Van Tuinen 2014.

³⁵¹ Although these prints almost postdate the dating of the Amsterdam sketchbook, many similar loose sheet prints depicting classical orders – by Italian and German printmakers - had started to circulate during the 1520s, see Zerner 1988; Brothers 2010; Waters 2012.

³⁵² Studies for such metopes with putti heads and bucrania are found on folio 30r.



Fig. 3.1. **Jacob Cornelisz. Van Oostzanen (workshop)**, *The Amsterdam Sketchbook*, 1520-1533. Fol. 1v. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. 79 C 2a.



Fig. 3.2. **Jacob Cornelisz. Van Oostanen (workshop)**, *The Amsterdam Sketchbook*, 1520-1533. Fol. 13v. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. 79 C 2a.



Fig. 3.3. **Jacob Cornelisz. Van Oostanen (workshop)**, *The Amsterdam Sketchbook*, 1520-1533. Fol. 32r. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. 79 C 2a.

working in and around Brussels in the late 1510s and early 1520s. The clenched column on fol. 32r, shows a strong formal similarity to the columns which can be seen supporting the portico in Van Orley's *St. Helena Before the Pope in Rome* (fig. 3.4).³⁵³ The left column in Van Orley's *Job and Lazarus Polyptych* (1521) also fits within this architectural grammatical build-up.³⁵⁴ The central candelabra ornament, the flanking colonnettes and the structural compartmentalization of the column into rectangular units are distinct features applied in both imagined architectural constructions. Remarkably, comparisons within the painted oeuvre of Van Oostanen himself are more difficult to find. Although the Amsterdam painter had started to use Antique candelabra motives on pilasters as early as 1511, their architectural composition remains rather sober, with modest undecorated capitals.³⁵⁵



3.4 **Bernard van Orley**, *St. Helena Before the Pope in Rome* (left wing of Veurne Triptych), ca. 1510-20. Oil on oak, 102 x 95,5 cm. Brussels, Royal Museum of Fine Arts, inv. 4999. Photo: © KMSKB, Johan Geleyns – Art Photography.

Even more elaborate in its Antique ornamental language is a study for a portico or loggia separated over four different sheets. On folio 30r, (fig. 3.5) the lower left side of an ornate frame is drawn, which is continued on folio 18v (fig. 3.6). The standing figure of a standard-bearing angel which made its hesitant entry in the lower section of folio 30r, is now drawn with a more certain hand. Where the lower half of the design already indicates some level of loosely drawn perspective, the drawing of the upper part makes clear that this is not just a design for a frame but for a three-dimensional architectural structure, with a double window, separated by a baluster column in the background. The frieze, which now clearly runs through the construction, is frontally crowned with a large medallion from which garlands are draped. This element is worked out in more detail on folio 30v (fig. 3.7), where

³⁵³ Brussels, Museum of Fine Arts of Belgium, inv. no. 4999; Galand 2013, pp. 173-97.

³⁵⁴ Brussels, Museum of Fine Arts of Belgium, inv. no. 1822; Galand 2013, pp. 199-235.

³⁵⁵ The only comparable column in Van Oostanen's attributed body of paintings is standing in the background of the *Circumcision of Christ*, dated in the late 1510s. Portland (Oregon), Portland Art Museum, inv. 61.59. A similar capital in the Amsterdam sketchbook is also on folio 41v.

we can see that the medallion was to be decorated with some type of heraldry and the garlands are pulled up by putti, hanging on to a fantasy creature. A fourth drawing associated with the same design is drawn on folio 20v, which seems to be a loose and uncertain sketch for the composition, prior to the three more finished drawings (fig. 3.8). The same sheet was later re-used to sketch a pair of fishes. Perhaps the drawing on folio 13v was also intended as a second solution for the upper left section of the design, though this may be unlikely since all four above discussed sheets (18v, 20v, 30r, 30v) are marked by the draftsman with the initials A.F., signifying that they belong to the same design (fig. 3.9). There are many possibilities when thinking of applications for such a design. The three-dimensional rendering of the Antique edifice may point towards a piece of micro-architecture such as a luxurious tomb-monument, structurally similar to Margaret of Austria's monumental tomb in Brou, designed by Loys van Boghem and Jan van Roome in 1516-22.³⁵⁶ The presence of the escutcheon in the medal may point towards this commemorative function of the design, in which case the standard bearing angels would function as mourning figures, common to funerary monuments. Van Tuinen suggested that it is the design for a painted trompe-l'oeil frame, such as the one in Cornelis II Buys' *Last Supper* (1535).³⁵⁷ Although Buys' architectural framework is slightly more sober, this suggestion seems plausible when taking the close family connection of Buys to Van Oostanen into account. Buys was most likely also trained at the same workshop.³⁵⁸

The drafted architecture on folio 21v shows how the Amsterdam workshop was not only on the forefront of the innovations in Antique ornament, but that these artists were proficient in both the Antique and the *modern* Gothic manners (fig. 3.10). The sheet, which – due to its distinct shape - seems to have been copied after a now unknown side panel, combines Antique ornament with two niches decorated with *modern* Gothic tracery.³⁵⁹ As shown in recent research on the transition from Gothic to the Antique style, there was a large period of overlap in which both styles were considered very fashionable.³⁶⁰ The use of Flamboyant Gothic elements was not a sign of a traditionalist mindset from either patron or artist but was a sign of stylistic versatility and artistic capabilities. Just like other contemporary artists working more to the south, such as Gossart, Van Orley or Quinten Metsys, the artists working in Van Oostanen's Amsterdam workshop equally embraced this stylistic pluralism.

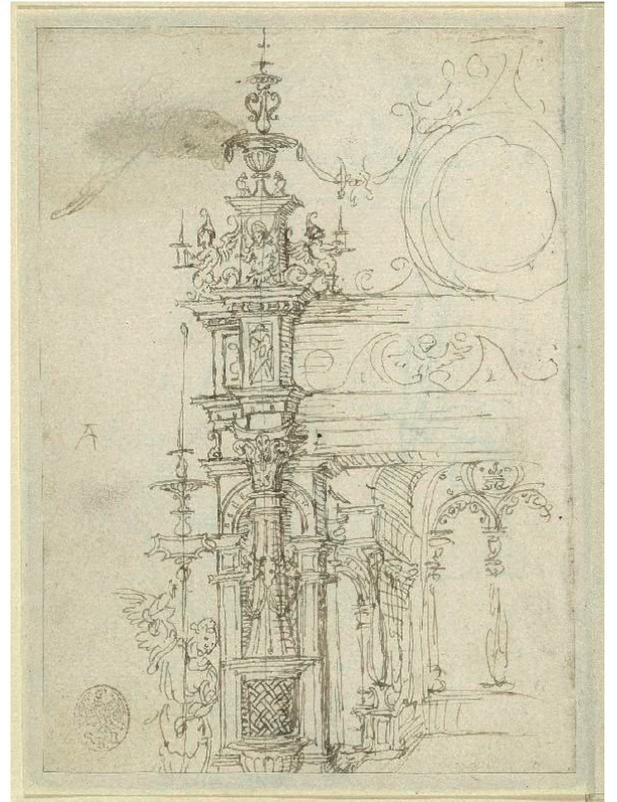
³⁵⁶ Hörsch 1994; pp. 93-111; Kavalier 2000; Kavalier 2004; De Jonge 2007, p. 23.

³⁵⁷ Van Tuinen 2014, p. 87.

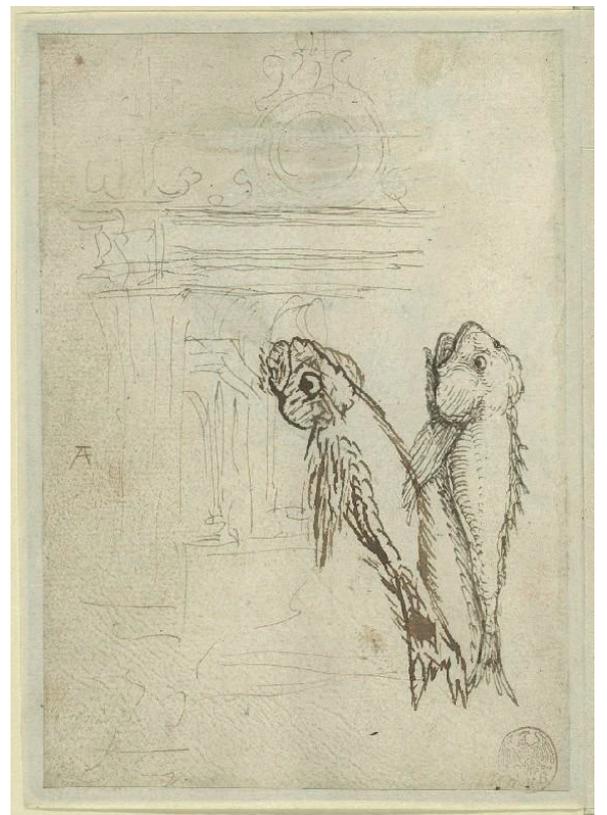
³⁵⁸ On Cornelis II Buys and his connection to the Van Oostanen workshop, see Six 1925; Dudok van Heel 2011; Meuwissen 2014c; Dudok van Heel 2014, pp. 184-86.

³⁵⁹ Another Gothic design can be seen on folio 11r, where a Gothic baldachin is sketched, like the designs distributed through the prints of Master W or Alart du Hameel (also see chapter 6).

³⁶⁰ Kavalier 2000; Mensger 2002; Mensger 2008; De Jonge 2008; Kavalier 2012.



Figs. 3.5 and 3.6. Jacob Cornelisz. Van Oostanen (workshop), *The Amsterdam Sketchbook*, 1520-1533. Fols. 30r. and 18v. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. 79 C 2a.



Figs. 3.7 and 3.8. Jacob Cornelisz. Van Oostanen (workshop), *The Amsterdam Sketchbook*, 1520-1533. Fol. 30v. and 20v. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. 79 C 2a.



Fig. 3.9. Hypothetical reconstruction of antique three-dimensional monument. (Digital assemblage of fols. 18v, 20v, 30r and 30v). © Author.



Fig. 3.10. Jacob Cornelisz. Van Oostsanen (workshop), *The Amsterdam Sketchbook*, 1520-1533. Fol.21. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. 79 C 2a.

3.3. Exercises in Geometry.

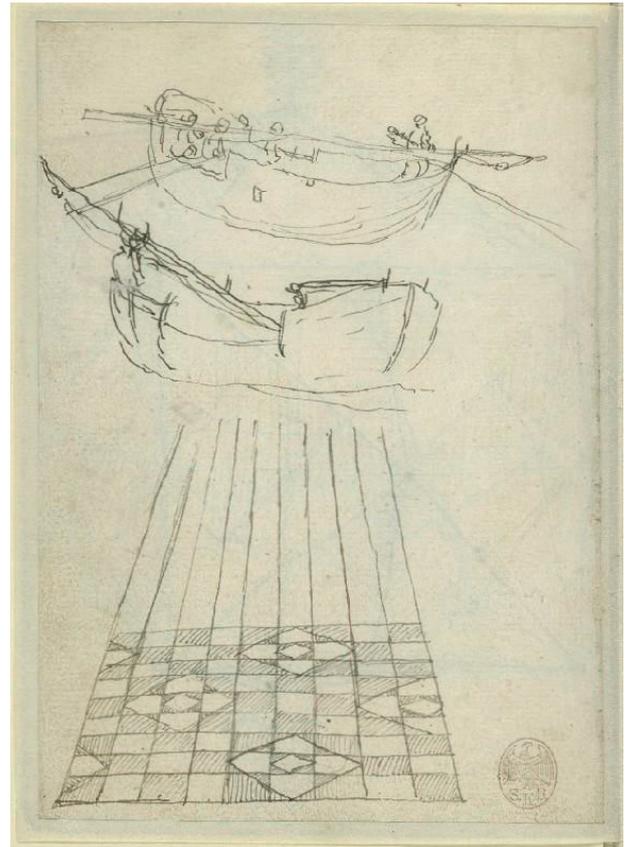
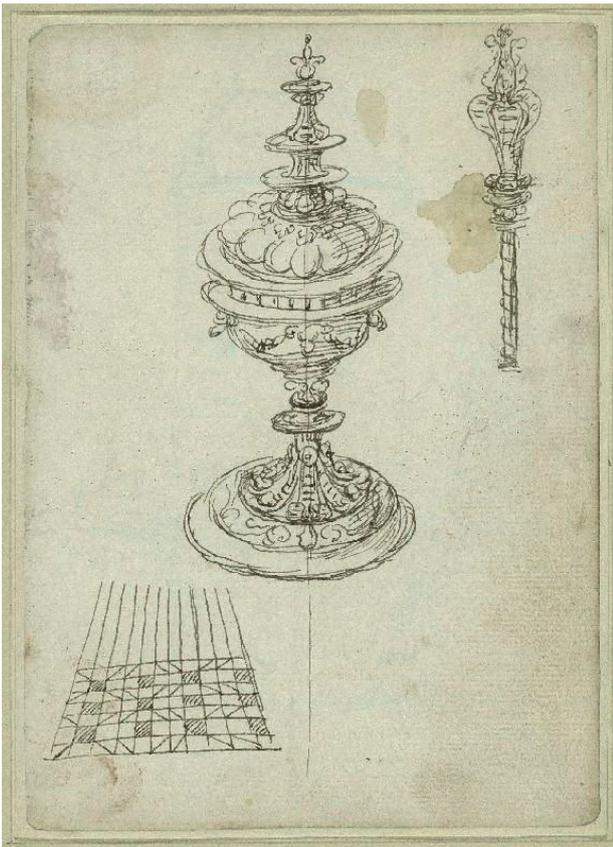
The content of the Amsterdam sketchbook becomes particularly interesting when we direct our attention to the studies on geometry which are scattered throughout the booklet. As we will come to see, these drawings are the most tangible evidence of the dissemination of technical geometrical knowledge between different professional artistic players in the Low Countries during the first decades of the sixteenth century.

3.3.1. Perspective

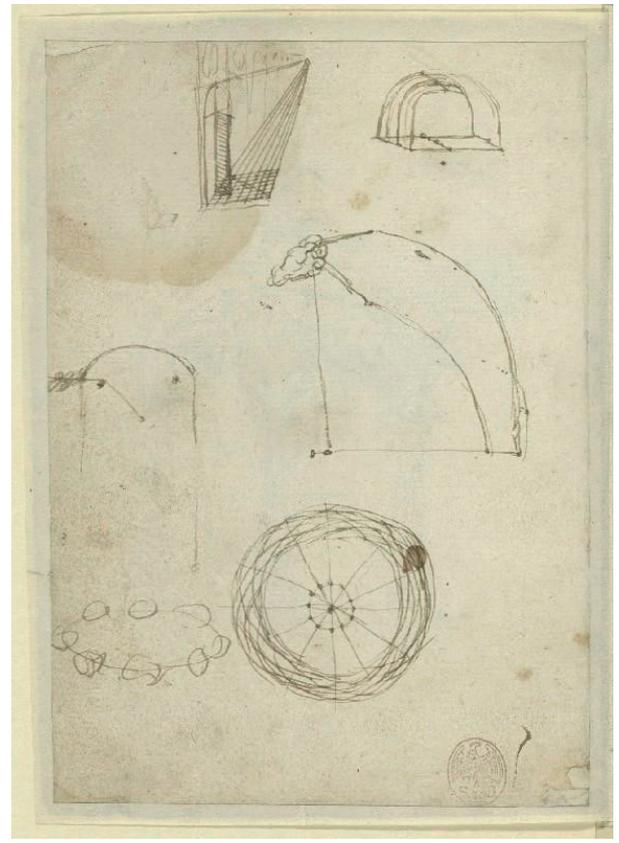
The first category of geometrical exercises consists of the application of geometry that one would expect from an early Renaissance workshop, namely exercises in linear perspective. On four different sheets (folios 3v, 15r, 25r, and fol. 45v) the draftsman drew a tiled floor, which is perhaps the initial exercise for anyone starting to study linear perspective. Interestingly, we can clearly see how the sheets are used during the learning process as an error in the tile pattern – the wrong square had been hatched - is clearly corrected on folio 15r (fig. 3.11).³⁶¹ A variation on this checkerboard pattern is given on folio 45v, where the pattern of the larger squares had been inverted (fig. 3.12). On folio 25r a different linear tile pattern has been constructed with squares and circles (fig. 3.13). Again, the drawing method is very uncertain and searching. In effect, the draftsman makes tremendous sins against the general rules of geometrical perspective as the size in between the frontal circles differs considerably. This is mainly because the perspectival exercise has not been executed in any measured manner but has been loosely drawn without the use of a ruler. In fact, the four perspectival floors deviate from Alberti's instructions in his *De Pictura* (1435). In his basic exercise on linear perspective in Book I, Alberti instructs the reader to first draw a rectangle – as the perspectival 'window'. "Then I establish a point in the rectangle wherever I wish; and as I occupies the place where the centric ray strikes, I shall call this the centric point. (...) Having placed the centric point, I draw straight lines from it to each of the divisions on the base line".³⁶² In all four perspectival floors in the Amsterdam sketchbook, however, the vanishing point of the orthogonals is placed outside of the rectangular window. A lightly more advanced exercise in linear perspective is found in the upper left of folio 27v, a small, tiled floor now serves as the basis the construction of a diagonal perspective (or two-point perspective), to construct what seems like a long corridor or an elongated space (fig. 3.14). Again, there is no trace of auxiliary lines or the aid of a ruler. Associated with these perspectival experiments, are some sketches on folio 17v (fig. 3.15).

³⁶¹ Van Tuinen 2017, p. 63.

³⁶² Alberti 1991 (1435), I, 19; pp. 54-55.



Figs. 3.11 and 3.12. Jacob Cornelisz. Van Oostsanen (workshop), *The Amsterdam Sketchbook*, 1520-1533. Fol. 15r and 45v. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. 79 C 2a.



Figs. 3.13 and 3.14. Jacob Cornelisz. Van Oostsanen (workshop), *The Amsterdam Sketchbook*, 1520-1533. Fol. 25r and 27v. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. 79 C 2a.

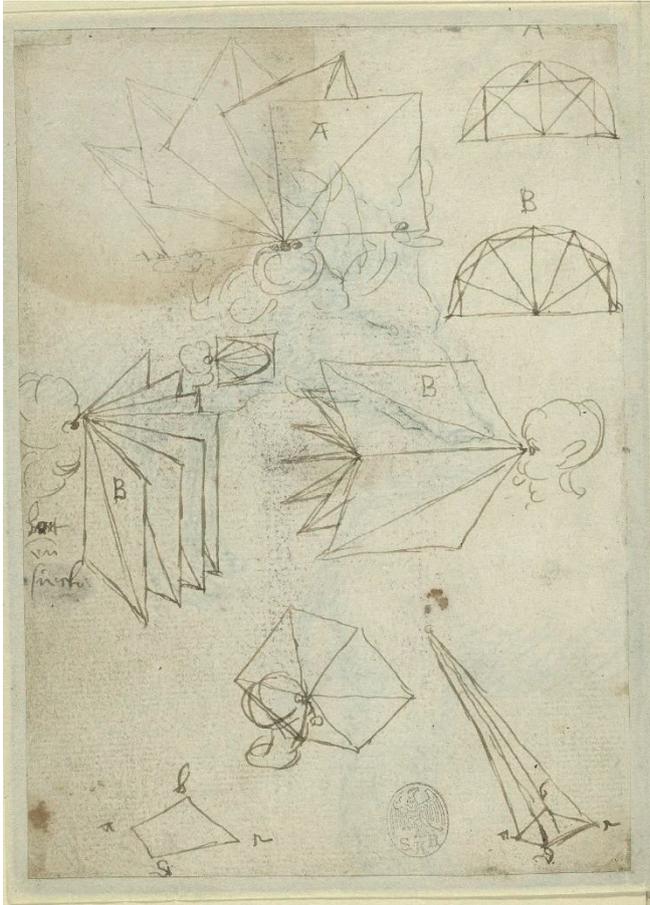


Fig. 3.15. Jacob Cornelisz. Van Oostanen (workshop), *The Amsterdam Sketchbook*, 1520-1533. Fol. 17v. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. 79 C 2a.

They represent rectangular and triangular constructions, projected from a stylised human eye. These sketches can best be interpreted as exercises in the construction of visual pyramids, as they are also explained by Alberti.³⁶³ Two different exercises, here indicated with A and B, seem to have been executed. The visual pyramid is rendered from different points of view, in ground plan and several elevations.

These experiments in linear perspective and optics give a unique insight on how an Amsterdam artist working in the 1520s was struggling to understand the rules devised by Brunelleschi and Alberti about a century earlier. Although the use of geometrically constructed linear perspective in Netherlandish art, dates to at least the middle of fifteenth century, the drawings in the Amsterdam sketchbook constitute the first tangible signs of the applications of Albertian perspectival theory.³⁶⁴ None of these perspectival exercises seem to have been made by actual measurements or the use straight lines. Most likely they functioned as study exercises and were copied after other drawings or printed images which had applied geometrical precision. Nonetheless they do illustrate a growing theoretical interest in geometry and its applications. Sources for perspectival theory by the late 1520s could have come from various angles. Although Alberti's *De Pictura* forms a prime suspect, no printed editions had been made by then.³⁶⁵ Among the early sixteenth-century humanist libraries in the Low Countries, the only manuscript copy of Alberti's treatise of perspective appears in the 1525 inventory of the Antwerp canon Willem Heda, whose splendid house on the Groenplaats, with its rusticated façade, was one of

³⁶³ Alberti 1991 (1435), I, 12-17, pp.47-53.

³⁶⁴ Although Jan van Eyck seems to have applied an intuitive and empirical form of linear perspective, it was Petrus Christus to whom the first use of linear perspective in 1457 is usually attributed. Kern 1904; Doehlemann 1911; Panofsky 1997 (1924-25), pp. 60-62, n.53; Ainsworth 1994, pp. 40-49. On Van Eyck and his knowledge of geometry, optics, and perspective, see Martens 2020, esp. pp. 163-76.

³⁶⁵ The first printed Latin edition of *De Pictura* appeared in Basel in 1540. Seven years later, Ludovico Domenichi's Italian edition was printed in Venice.

earliest outspoken examples for the Antique-styled architectural style in Antwerp.³⁶⁶ Since the use of Albertian perspectival constructions does appear in several works by Petrus Christus and Dirk Bouts, it has been suggested that this theory may have circulated in the Low Countries rather early.³⁶⁷ Contemporary to the Amsterdam sketchbook, knowledge about Alberti's treatise on perspective circulated at least in humanist urban circles. This is testified by some explicit reference made to Alberti, by Jan Grapheus who, in 1528 published Pomponius Gauricus' *De Sculptura*.³⁶⁸ In the foreword which is dedicated to Jean de Carondelet, Grapheus mentions those writers and artists which had equally written theoretical treatises to the art of sculpture. As Antique examples he names Pliny the Elder and Vitruvius, the two modern writers are Alberti and Albrecht Dürer.³⁶⁹ The latter had written his *Underweysung der Messung* three years earlier.

Grapheus' Antwerp Gauricus edition might in fact be an additional source for the construction of perspective. Gauricus, a scholar from Padua, published his Latin treatise on the art of sculpture in 1504. In it, the humanist not only relates on the nature of sculpture, but also advocates the use of geometrical principles to create art, which he exemplifies with a story about Donatello and his use of the abacus.³⁷⁰ In addition, Gauricus also sets out some perspectival rules which have been described by Martin Kemp as "a mélange of the Albertian method, using an intersecting plane (the central vertical), and the workshop which depends on diagonal points".³⁷¹ This method of diagonal perspective, which is absent with Alberti, seems to have been applied in the perspectival exercise on folio 27v. Although Grapheus' 1528 edition of Gauricus did not contain any illustrations, its theoretical content may have had an indirect influence on the sketches seen in the Amsterdam booklet. Another likely theoretical candidate to have entered the Amsterdam workshop is the first illustrated treatise on perspective, *De Artificiali Perspectiva*, by the French priest and diplomat Jean Pélerin, known as Viator, first published by Pierre Jacques in Toul in 1505.³⁷² The book with numerous schematic woodcuts was primarily intended for painters. Some of its woodcuts were directly based upon perspectival constructions by Jean Fouquet and Albrecht Dürer. Subsequent (authorized) editions were published in 1509 and 1521, along with French and German pirated editions. Given its large demand, Pélerin's illustrated treatise on perspective contributed much more to the dissemination of artificial

³⁶⁶ Van Langendonck 2002; De Jonge 2007, pp. 28-29; Bass 2016, p. 14. A connection is possible between the network of Gossart/Van Schorel/Van Oostanen and Heda, but this stays only very speculative.

³⁶⁷ Schabacker 1974, p. 75; Ainsworth 1994, p. 47.

³⁶⁸ Gauricus 1528; De Jonge 2007, p. 48; De Jonge 2017b, p. 140.

³⁶⁹ 'Scripsit Plinius Secundus in opere Naturalis historiae, quaedam tum ad satuariam tum picture am attentia: Tetigit & quaedam Vitruvius, dum bonu[m] architectum instituit: Fecere & id quoq; ex antiquis scriptoribus alii nonnulli. Ex neotericis autem Baptista Albertus Leo, atq[ue] (ut caeteros taceam) Albertus Durerius'. Gauricus 1528, fol. 2v.

³⁷⁰ Gauricus 1504, pp. 183-87; Kemp 1990, p. 40.

³⁷¹ Kemp 1990, p. 41. On Gauricus' perspective, also see Klein 1961.

³⁷² Brion-Guerry 1962; Roccasecca 2001, pp. 65-67.

linear perspective than Alberti's treatise did. Both later editions include additional woodcuts, such as some supplementary examples for perspectival floor patterns. One of these patterns of Pélerin's treatise in which the tiles are decorated with rhombus' (fol. B1r) might have been the example for the floor pattern as depicted on folio 45v of the Amsterdam sketchbook, where the rhombus has been spread out over nine instead of four tiles (fig. 3.16). Since other geometrical constructions in the sketchbook seem to have found their theoretical source in Dürer's *Underweysung der Messung*, printed in Nuremberg in 1525, it may also have had

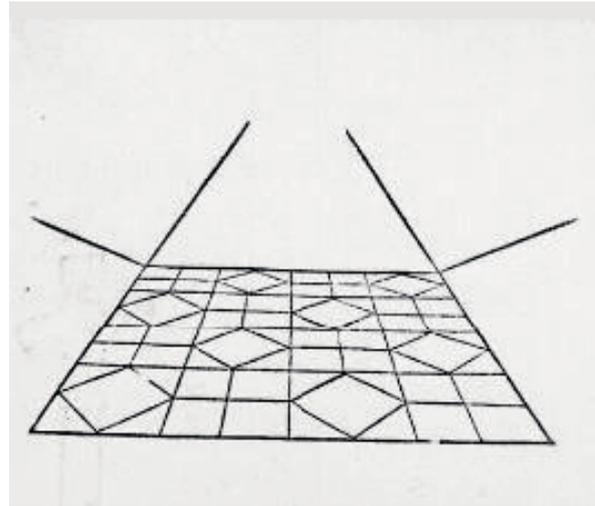


Fig. 3.16. Jean Pélerin (Viator), *De Artificiali Perspectiva*. Toul, Pierre Jacques, 1509. Fol. B1r (detail). Paris, Bibliothèque Nationale de France, C 79212.

influence on the conception of the perspectival ideas present in the sketchbook.³⁷³ In his introduction to Gauricus' treatise, it is specifically mentioned by Grapheus that "Dürer's book on symmetry is extremely useful to both sculptors and painters alike".³⁷⁴ Like the Amsterdam booklet, the applications of geometry by Dürer are not restricted to painterly perspective but crossed disciplinary boundaries. The fourth and final Book of Dürer's treatise on geometry, which includes the four famous woodcuts of perspectival windows, begins with a section on map projections and polyhedral geometric solids (cf. infra). Although a drawing of tiled floors in the so-called Silverpoint sketchbook, made by Dürer during his stay in the Netherlands (fig. 3.17) bears some resemblance to those in the Amsterdam sketchbook, there is no evidence for contact between Dürer and Van Oostanen during his 1520-21 journey to the Low Countries.³⁷⁵

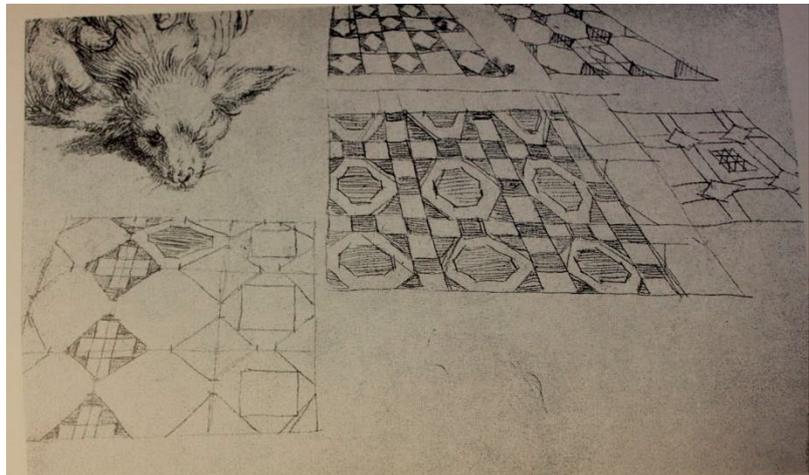


Fig. 3.17. Albrecht Dürer, *Study sheet with perspective exercises*, 1521. Silver point, 125 x 180 mm. Braunschweig, Sammlung Blasius. Photo: Winkler 1936-38, vol. 4, no. 787.

³⁷³ On Dürer's use of perspective, see Panofsky 1943, pp. 247-54; Peiffer 2004; Peiffer 2007.

³⁷⁴ 'Albertus Durerius, aedito dudum libro germanico de Symmetria, tam que etiam pictoribus multo utilissimo' Gauricus 1528, fol. 2v. The neologism *utilissimo* in this sentence can either be translated as *useful* or *often used*.

³⁷⁵ Winkler 1936-38, vol. 4, no. 787; Strauss 1974, vol. 4, p. 2082-83, no. 1521/45.

The earliest writings on linear perspective in the Low Countries date from 1531 and were published by Joachim Sterck van Ringelberg, known as Fortius.³⁷⁶ He was born in Antwerp and studied and later taught at the newly erected *Collegium Trilingue* in Leuven from 1516 to 1526, where he was part of the network of Frisius and Erasmus. He published various treatises on diverse subjects such as medicine, pedagogy, astrology, language and mathematics. His *Lucubrationes* ('studies done at night'), published in Lyon in 1531, contains a quantified analysis of linear perspective with two vanishing points, akin to the method applied by Gauricus.³⁷⁷ Sterck van Ringelberg intended to present perspective as an extension of the Liberal Arts; but - surprisingly - not as an application of geometry, but rather as an expression of rhetorical thinking.³⁷⁸ However, the publication of this rather obscure treatise it is considerably late as a direct source for the draftsman of the sketchbook.

3.3.2. *Ad Triangulum*

One of the most interesting drawings in the sketchbook for our discussion of introduction of practical geometry into the painter's workshop is found on folio 34v (fig. 3.18). The sheet depicts a heavy clustered column, as one would find them in many works of micro-architecture. On the right side of the page, three geometrical schemes provide the viewer with the technical information required to deconstruct the design process and the spatial dimensions of the architectural element. The specific rendering of this drawing is conceived according to the *Ad Triangulum* method, following the Gothic design practice as it had been applied by masons, stonecutters and goldsmiths at least since the twelfth century.³⁷⁹ The *Ad Quadratum* and *Ad Triangulum* design process entails that the horizontal sections were based upon the Euclidean geometrical figures of a square or an

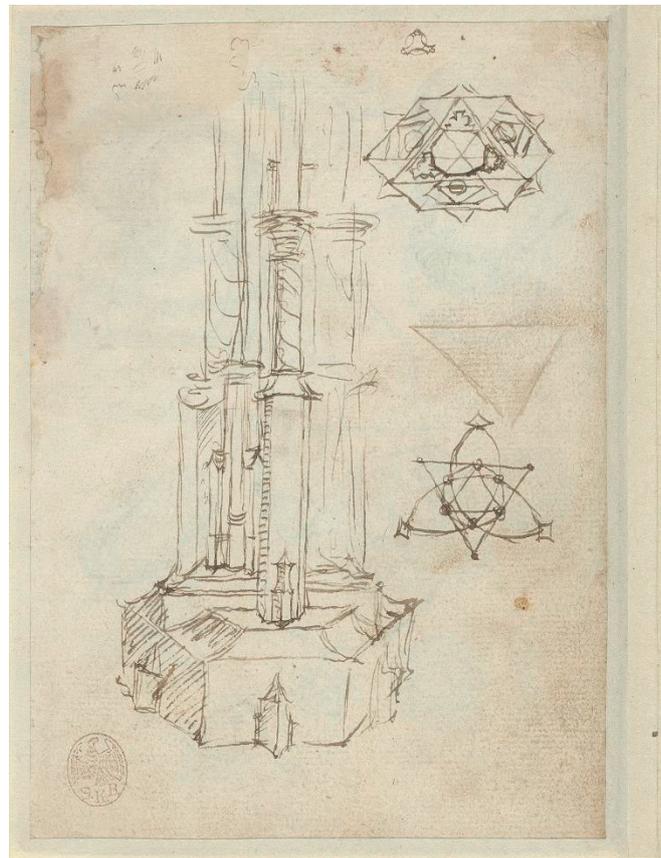


Fig. 3.18. Jacob Cornelisz. Van Oostanen (workshop), *The Amsterdam Sketchbook*, 1520-1533. Fol. 34v. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. 79 C 2a.

³⁷⁶ Indestige 1972; Heuer 2009, p. 258, n. 44.

³⁷⁷ Elkins 1994, p. 65.

³⁷⁸ This point of view is a strong indication that philology and engineering were not seen as mutually reinforcing, rather as exclusionary.

³⁷⁹ Shelby 1972; Shelby 1977; Bork 2011b, pp. 4-7.

equilateral triangle, respectively.³⁸⁰ Compass and ruler were used to creatively rotate, inscribe and divide these figures into often complex and spellbinding designs, without the requirement of arithmetic calculations. By the end of the fifteenth century some South German masons and goldsmiths, such as Hans Schmuttermayer, Mathes Roriczer and Lorenz Lechler had started to record and disseminate these design methods in written and printed form.³⁸¹ The elevation of the object or edifice was then determined by this geometrical module. This process, in which the geometrical scheme led to the elevation, and which in German instruction booklets was called the *Auszug* (“the pulling out”), was essential in rendering a three-dimensional impression of the design. Although most surviving examples of architectural drawings in which this design method was applied, come from German or French building- and design projects, it was a standard technique used in all Gothic design, including the Low Countries.³⁸² A Netherlandish example of this technique is found in the design drawing for a Bishop’s Crosier (c. 1540), discussed in chapter 2.3 (fig. 2.16).³⁸³

In the case of folio 34v in the Amsterdam sketchbook, the geometrical sections have been drawn twice. By combining both plans, the artist enabled the geometrically schooled viewer to dissect the original design process of the column step by step (fig. 3.19). (1) The starting point was a hexagonal figure (for the columns’ base), which was then divided into six different triangles. (2) Next, an equilateral triangle was inscribed within the hexagon, taking the middle point of the hexagon’s sides as starting point. (3) This triangle is then inverted upon the latter, forming a smaller hexagram. (4) Semicircles are drawn with a compass from each point of the two triangles just created. (5) Finally, at the places where these circles intersect with each other, dots are placed as a basis for the octagon at the centre of the ground plan. The last three steps in the design process can be seen in the lower drawing, where the interlocking triangles and semicircles are clearly shown. The crossings of lines are indicated with large auxiliary dots. A tiny third geometrical section is to be spotted at the upper right of the sheet, above the hexagon. This is probably an individual study for one of the colonettes flanking the clustered column.

³⁸⁰ The terminology derives from the building accounts of Milan cathedral where Heinrich Parler, a German consultant active at the Milan building lodge, recommended the cathedral should be designed *ad quadratum*, meaning “to the square”, see Frankl & Panofsky 1945; Ackerman 1949; Bork 2011b, pp. 412-19

³⁸¹ Shelby 1977; Seeliger-Zeis 1967; Seeliger-Zeis 1982; Coenen 1990.

³⁸² Geometrical analysis of the town halls of Bruges, Brussels, Oudenaarde, Leuven and Veere suggest the application of the same constructive geometry, based upon the use of squares and equilateral triangles, see Vandevyvere 2001. Further evidence for the use of *ad quadratum* and *ad triangulum* design techniques, is the geometrical analysis of Joos II Metsys’ elevation drawing for the church of St Peter in Leuven, see Bork 2011b, pp. 400-10.

³⁸³ London, Victoria and Albert Museum, inv. E 739-1912.

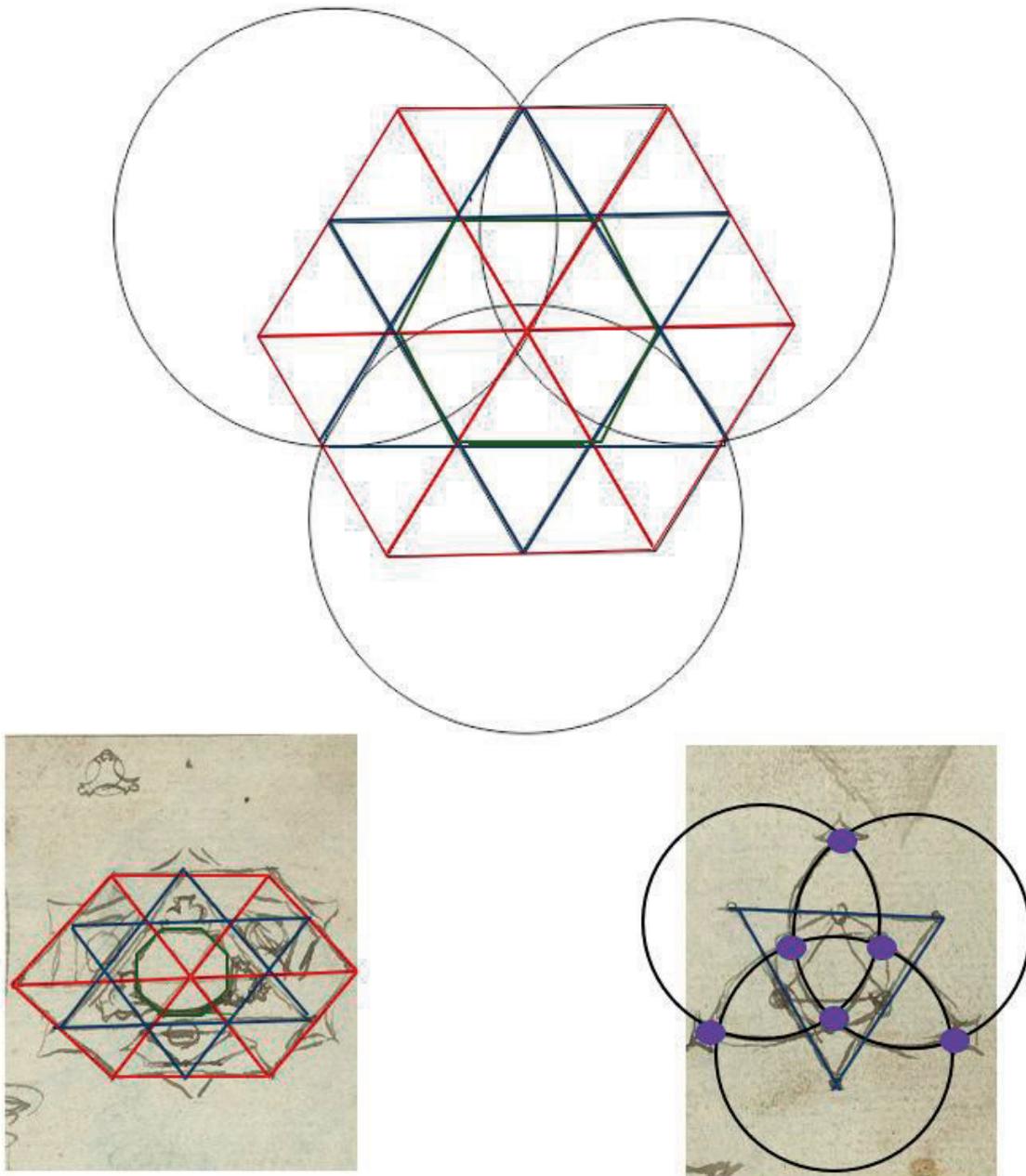


Fig. 3.19. Design process of geometrical section: **(1)** Drawing a hexagon and dividing it in 6 equilateral triangles. **(2)** two equilateral triangles are inscribed (a “Star of David”) within the hexagon, taking the middle point of the hexagon’s sides as starting points. **(3)** They form the basis for inscribing a smaller hexagram (incorrectly made into an octagon). **(4)** Semicircles are drawn with a compass from each point of the two triangles just created. **(5)** At the places where these circles intersect, dots are placed as a basis for the octagon at the centre of the ground plan.

A more modest inclusion of this constructive geometry is found on folio 42v, where a design can be seen for - depending on the size of the object - a *modern* Gothic chalice or baptismal font (fig. 3.20). The two smaller drawings to the left, which previously have been interpreted as floral ornaments, are more likely sketches of the geometrical construction pattern.³⁸⁴ The hexagonal shape is consistent with the shape of the chalice's middle part. The floral pattern drawn within the hexagon, corresponds with the lines leading up to the tracery. The floral figure on the lower left of the sheet can probably be interpreted as the decorative pattern that could be seen on the foot of the object, when viewed from above. In the elevation of the chalice, the foot seems to be connected to the cup with a flower of some sort.

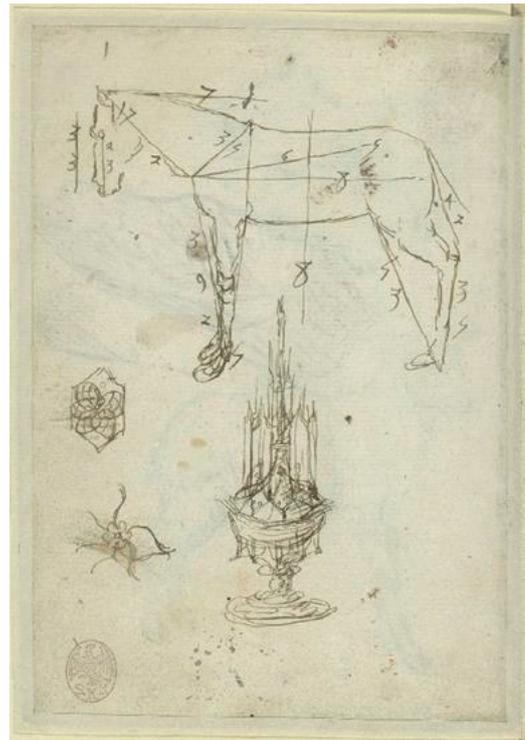


Fig. 3.20. Jacob Cornelisz. Van Oostsanen (workshop), *The Amsterdam Sketchbook*, 1520-1533. Fol. 42v. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. 79 C 2a.

Like the perspectival views in the booklet, these geometrical designs are very searching and are the testimony of a learning process of an artist attempting to master the art of geometry. The impression is given that the geometrical scheme is dissected and reconstructed from the elevation of the existing object or architecture, rather than the other way around. Again, no use seems to have been made of a ruler as all the lines are drawn with a loose and unsteady hand. In fact, several errors were made in the geometrical construction of the polygons, most notably in the fact that both hexagons are not equilateral. Despite its amateurism, these two drawings are testimony to the fact that there was a clear interest by painters in constructive geometry as it had been applied by masons and goldsmiths for generations. Although this technical knowledge had been published by Roriczer and Schmuttermayer, publications such as those remained very local and with a limited print run. Prints such as those by Du Hameel and Master W were more likely to have been responsible for the dissemination of this geometrical rendering method to other professional groups and new audiences (see also chapter 6). The less tangible method of knowledge transmission is through oral communication. It was suggested by Jane Carroll that Van Oostsanen may have come from a family background of goldsmiths, which would explain how this knowledge was at hand.³⁸⁵ Since Van

³⁸⁴ Van Tuinen 2014, p. 148.

³⁸⁵ Carroll 1987, p. 9, 131; Matile 2000, p. 178; Kik 2014a, p. 87. Another element which points to an education in a goldsmiths' workshop is the fact that Van Oostsanen's daughter Anna Jacobsdr. married the prosperous Amsterdam goldsmith Michiel Brugman in 1524, see Dudok Van Heel 2011, p. 49.

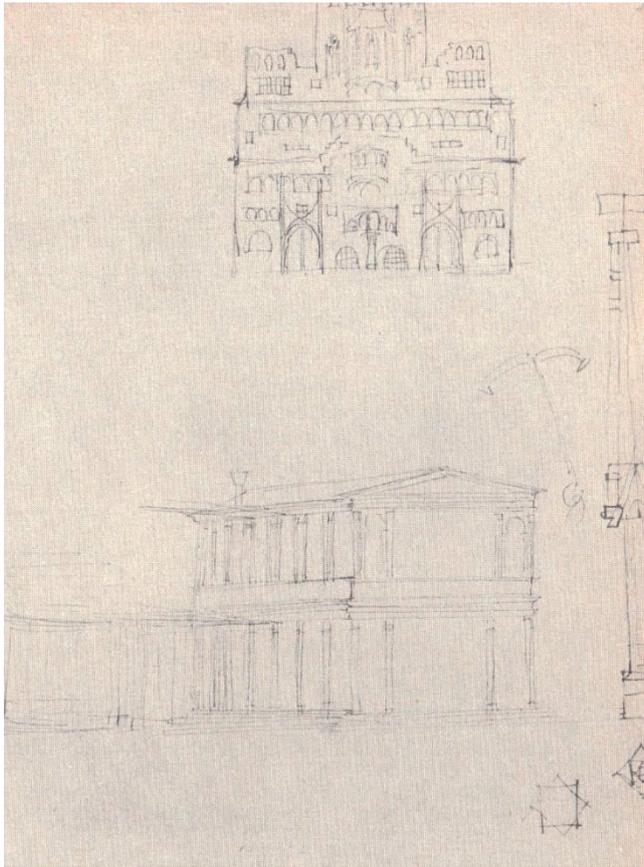


Fig. 3.21. Albrecht Dürer, *Study sheet with architectural sketches*, 1494-95. Pen and ink, 215 x 178 mm. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. Kdz 1277. Photo: © Winkler 1936-38, vol. 1, no. 93.

Oostanen's earliest dated works are his large woodcut series and he did not produce any copper engravings, a family background as carpenter or wood sculptor (*figuursnyder*) would perhaps be a more plausible training in a small village such as Oostzaan. The introduction of Gothic design techniques within the painter's workshop indicates that the geometrical knowledge was not merely the result of an influx of foreign humanist treatises on geometry, but more likely as the result of the oral transfer of knowledge. A parallel can be drawn with the Dürer workshop in Nuremberg. Dürer showed a great familiarity with the *ad quadratum* method, because of his background as a goldsmith's son. A drawing, which was probably made during his first trip to Venice in 1494-95 illustrates the young artist's understanding of projection of three-dimensional architecture (fig. 3.21).³⁸⁶ The

sheet, which is devoted to architectural drawings, depicts a façade of an undetermined town hall and at the bottom side a perspectival projection of a two-story antique temple or Venetian palazzo.³⁸⁷ At the right edge of the sheet, the young Dürer included an elevation of a pinnacle, combined with the typical *ad quadratum* schemes required for the *auszug*. The drawing is almost literally derived from the illustration found in Hans Schmuttermayer's *Fialenbüchlein*. Not only was Dürer familiar with the booklet of the Nuremberg goldsmith, but he was also personally acquainted with Hans Schmuttermayer. In a document of 1487, a man named Hermann Leisner mentioned that he still owed some money to two Nurnberg goldsmiths: Hans Schmuttermayer and Albrecht Dürer (the elder).³⁸⁸ This suggest that Dürer's father and Schmuttermayer might have collaborated on a project. The inclusion of these architectural exercises on pinnacles among Dürer's vast array of drawings, shows

³⁸⁶ Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. KdZ 1277v. Strauss 1974, vol. 1, no. 1495/24; Anzelewsky & Mielke 1984, pp. 16-17, no. 11v.

³⁸⁷ The specific chimney pipe on the roof points more towards a Venetian Palazzo.

³⁸⁸ Shelby 1977, p. 29, n. 2; Schmitt 2004, p. 172.

how this constructive geometry was thought useful for training purposes in a painter's workshop.³⁸⁹ Even after his two trips to Venice and his familiarity with new perspectival theories, Dürer cherished the projection method used by masons and goldsmiths. This was acknowledged in the dedication of his *Vier Bücher zu menschlicher Proportion* (*Four Books on Human Proportion*, 1528), where Dürer wrote that whoever wants to study proportions must "first learn geometry and gain an understanding of how all things should be based and constructed in the way that trained stonemasons practice in their daily use".³⁹⁰



Fig. 3.22. Anonymous Netherlandish, *The house of the German trading nation*, ca. 1550-1580. Pen and ink with brown wash, 287 x 197 mm. Bruges, Print Room, inv. 75.23. Photo: © Author.

A drawing, now in the print room of Bruges, may be another rare Netherlandish instance where an artist applied the ad quadratum method to achieve the three-dimensional rendering of perspective (fig. 3.22).³⁹¹ The drawing, dated around the middle of the century, depicts a perspectival view of the house of the German trading nation (*Oosterlingenhuis*) in Bruges, built by Jan van den Poele between 1478 and 1481. The drawing includes some sketchy geometrical projections, shown at the upper left side.³⁹² Clearly, the draftsman had some difficulty with his perspectival construction. In rendering the polygonal shape of the large central spire, he sketched several versions of the hexagonal scheme, which allows us to follow his thinking process. Much like the artist of the Amsterdam sketchbook, the Bruges draftsman is struggling to manage linear perspective and to imagine the exact dimensions of the spire, the draftsman

³⁸⁹ A drawing contemporary to Dürer's pinnacle drawing preserved in Erlangen confirms the spread of the booklets of Roriczer and Schmuttermayer in German workshops, see Buck & Messling 2009, no. 152.

³⁹⁰ Dürer 1528, fol. Aii; Rupprich 1956, vol. 1, pp. 125-7; Strauss 1972, p. 32; Ashcroft 2017, vol. 2, p. 870. It has been suggested that the theoretical pamphlets of Roriczer and Schmuttermayer also influenced Dürer in his complementary use of text and image, and additionally in his technical rhetoric, see Strauss 1977, pp. 16-17; Remond 2012, p. 500. For a technical comparison between Dürer's mathematical treatises and constructive geometry, see Lefèvre 2004; Pfeiffer 2004; Gluch 2007.

³⁹¹ Bruges, Musea Brugge, Steinmetzkabinet, inv. 75.23. Firmin 1948, pp. 25-26; Van de Velde 1984, vol. 2, p. 348.

³⁹² It is unlikely that these sketches are later additions, since they are drawn in the same black ink as the architecture.

appealed to the projection method familiar among masons. It is impossible to tell whether the draftsman who drew the German trading nation was trained as a painter or rather a mason, goldsmith, or land surveyor.³⁹³ But as shown by the Amsterdam sketchbook (and in extenso Dürer's drawing), by the mid-sixteenth century, the knowledge required to make these geometrical constructions had spread outside the goldsmith's workshop and the building lodge and had entered the painter's studio.

3.3.3. Polyhedral Solids

The presence of no less than fifteen studies on polyhedral or Platonic solids in the Amsterdam sketchbook puts the geometrical design practice onto a more theoretical level and can be linked to the afore discussed perspectival studies. The polyhedral figures in the Amsterdam sketchbook are the earliest testimony of this advanced geometrical theory in the Low Countries. To understand the importance and, in addition, the possible sources for the polyhedral figures in the Amsterdam sketchbook, a brief historical overview of the theoretical background is indispensable.

The theory of polyhedral reaches back to Archimedes who had discovered thirteen solids whose faces were regular polygons of more than one kind.³⁹⁴ It was most likely through the mentioning of five regular solids in Plato's *Timæus* (c. 360 BC), that the theory gained more attention in the antique world, and subsequently during the Renaissance.³⁹⁵ In his dialogue Plato associates these five solids to the five elements as proclaimed by Empedocles – the cubic with earth, the icosahedron with water, the octahedron with air, the tetrahedron with fire, and ultimately the dodecahedron with ether as the binding force in the universe.³⁹⁶ Plato's description of the polyhedra remained rather vague and basically functioned to illustrate his philosophical views on the correlations between the perfection of the elements and the solids. This lack of geometrical foundation was solved when Euclid devoted his thirteenth Book of the *Elements* (c. 300 BC) specifically to the construction and calculation of regular solids. By the second half of the fifteenth century, in the wake of Neoplatonist thinking in artistic centres such as Florence, Padua, Urbino, Mantua or Milan, the scientific interest in polyhedral figures was on the rise among humanists and artists alike.³⁹⁷ The first artist to devote a new treatise on the subject was Piero della Francesca (c. 1412-1492). He not only wrote the *Libellus de quinque corporibus*

³⁹³ The Bruges drawing was originally pasted into the 1539 edition of Pieter Coecke van Aelst's *Generale Reglen der Architecturen*. However, this may be more representative of the architectural interests of a later collector, rather than the original draftsman.

³⁹⁴ This is according to Pappus (300-350), who described the Archimedean solids in his *Collection*. Field 1997b, p. 241.

³⁹⁵ Panofsky 1943, pp. 258-60; Emmer 1982; Field 1997b.

³⁹⁶ Plato, *Timæus*, 54-56, pp. 131-135.

³⁹⁷ Instrumental in this development were Marsilio Ficino's commentaries on Plato and Proclus in his *Theologica Platonica* of 1482. Ficino also refers to the *Timæus* and the Platonic solids in his letters on several occasions. See Ficino 1975, vol. 1, pp. 85-88, no. 43; Richter 1995, pp. 30-31.

regularibus (Booklet on the Five Regular Bodies, c. 1450) but gave plenty attention to the Platonic solids in his *Trattato d'abaco* (Treatise on the Abacus, 1450) and his *De prospettive pingendi* (On the Perspective of Painting, 1475).³⁹⁸ Both in his Abacus and his Booklet he treated the theory on the regular solids as a reconciliation of the geometrical procedures of Euclid with the arithmetical calculations of the abacus (a hereditary feat as the son of a merchant).³⁹⁹ Piero's abacus is also the first to depict the polyhedra.⁴⁰⁰ However, none of these works ever received a printed edition during the Renaissance. Piero della Francesca was to have a considerable influence on the Franciscan monk and mathematician Luca Pacioli (1445-1514).⁴⁰¹ His *De Divina Proportione* was first published in Venice in 1509, and focused on Euclidian geometry, mathematical proportions, geometric perspective and Platonic solids.⁴⁰² The last part was mainly based on Piero's booklet on the same subject.⁴⁰³ A handwritten manuscript edition of the treatise was already composed in 1498 and dedicated to Pacioli's patron Ludovico il Moro, Duke of Milan.⁴⁰⁴ This manuscript was famously illustrated with coloured drawings by Leonardo, who was also working under ducal protection since 1496. At the time when the original was being conceived, Pacioli was also in intense contact with the artist Jacopo de' Barbari, who made his famous and enigmatic portrait in 1495 (fig. 3.23).⁴⁰⁵ The portrait is a true statement of intellectual erudition as the Franciscan scholar poses while drawing a Euclidian exercise on a chalkboard. With his other hand he is seen pointing towards an open volume of Euclid's *Elements*. To highlight Pacioli's interest in Platonic solids, a glass rhombicuboctahedron is seen hanging from the ceiling, next to his head.⁴⁰⁶ It is hard to understate the influence which Pacioli must have had on de' Barbari's mathematical and geometrical thinking as an artist. The fact that de' Barbari fully embraced the importance of Euclidean geometry, perspective, and proportions to ennoble and elevate his own profession of painting is strongly influenced by his contact with Pacioli, Leonardo and perhaps also Piero. It amply provided him with the proper mathematical technical background to construct and render his *Bird's-eye view of Venice* in 1500.⁴⁰⁷ Equally influential, if not more, were Pacioli's writings

³⁹⁸ Baxandall 1972, pp. 100-108; Richter 1995, pp. 36-47; Field 1997b, pp. 246-53; Reiss 1997, pp. 142-44; Field 2005; Banker 2014, pp. 79-95.

³⁹⁹ Kemp 1990, p. 27.

⁴⁰⁰ Richter 1995, p. 33.

⁴⁰¹ The research on Pacioli is extensive. For recent monographies, see Giusti 1998; Castrucci 2003; Ciocci 2003; Ciocci 2009.

⁴⁰² Field 1997a, pp. 253-66.

⁴⁰³ Pacioli probably met Piero della Francesca between 1491 and 1493 in the convent of their shared birthplace Borgo San Sepolcro, during the preparations of his *Sum[m]a de Arithmetica, geometria proportioni & proportionalità*, published in 1494, and a second edition in 1523. Banker 2014, p. 94; Böckem 2016, p. 60.

⁴⁰⁴ Three manuscripts of the treatise were made by Pacioli. The first was presented to Ludovico il Moro and is now preserved in the Bibliothèque de Genève; the second copy was presented to the condottiere Galeazzo da San Severino (c. 1460-1525), which is the copy now preserved at the Biblioteca Ambrosiana in Milan; a third copy was presented to Pier Soderini (1450-1522), *Gonfaloniere* of Florence. This copy is now lost.

⁴⁰⁵ Naples, Museo Capodimonte (inv. Unknown). Ferrari 2006, pp. 80-82; Böckem 2016, pp. 58-77.

⁴⁰⁶ On the meaning of the glass solid, see Tomlow 2000.

⁴⁰⁷ Howard 1997; Böckem 2016, pp. 32-57.

on the theoretical thinking of Albrecht Dürer. In his *Unterweysung der Messung*, Dürer devotes the fourth and final book to Platonic solids. Although it is often suggested that Dürer met Luca Pacioli in Venice or Bologna in 1507 or 1508, there are no factual sources for this claim.⁴⁰⁸ When writing his geometrical treatise, Dürer probably used a copy of *De Divina Proportione* as a source of inspiration for his writings on polyhedral figures.⁴⁰⁹ Dürer was also well acquainted with Jacopo de' Barbari, for whom the Nuremberg artist once had great admiration. In an oft-quoted letter from Venice, on 7 February 1506, Dürer writes to Willibald Pirckheimer: "And the stuff that pleased me so well eleven years ago does not please me at all now. (...) And I can tell you that there are much better painters



Fig. 3.23. Jacopo de' Barbari (attrib.), *Double portrait of Luca Pacioli with student*, ca. 1495. Oil on panel, 98 x 108 cm. Naples, Museo di Capodimonte. Photo: © WikiCommons.

⁴⁰⁸ The source for this assumption is a letter which Dürer sent from Venice to Pirckheimer on 13 October 1506: "I shall be finished here in another ten days. Then I shall ride to Bologna to learn more about the secret art of perspective, which someone there is willing to teach me". However, at that time Pacioli was in Florence, and not in Bologna, see Rupprich 1956, vol. 1, p. 105; Ashcroft 2017, vol. 1, p. 168, n. 14.

⁴⁰⁹ Panofsky 1943, p. 259; Strauss 1977, pp. 21-24. Dürer might even have been acquainted with one of the three existing manuscript editions which was owned by Galeazzo da San Severino, who Dürer met in Nuremberg in 1505, see Ashcroft 2017, vol. 1, pp. 233, 835.

here than Master Jacopo. But Anton Kolb swears an oath that there is no better painter alive on earth than Jacopo. The other laugh at him and say if he were any good, he'd have stayed here, etc."⁴¹⁰ Dürer must have met Jacopo de' Barbari during his first stay in Venice in 1495, at the time when the Venetian painter was involved in painting Pacioli's portrait. It is probably at this moment that Dürer was introduced to Pacioli's geometrical thinking and the rules of perspective. Despite Dürer's condescending remarks about Master Jacopo, he acknowledges de' Barbari as a source of inspiration when writing a draft version in 1522 of his treatise on *Human Proportions* (which would only be published in 1528): "Yet as I can find no one who has written anything about how to do human proportion, other than a man called Jakob, he was a native of Venice and an agreeable painter. He showed me a man and a woman whom he had drawn by measurement"⁴¹¹ Interestingly, both artists enjoyed some considerable time in the Low Countries and had many encounters with local artists.

This takes us back to the small northern workshop in the Amsterdam Kalverstraat where the draftsman of the sketchbook painstakingly tried to master the complexity of rendering these stereoscopic figures. Folio 3v depicts five different perspectival studies of a square within a cube (fig. 3.24). This exercise is repeated on folio 16v (fig. 3.25). Folio 41r shows a variation in this study, as it is now a sphere which is placed within a cube (fig. 3.26). The most complex polyhedron is found on folio 45r., which can be interpreted as being an icosidodecahedron: i.e., a quasiregular polyhedron which has thirty identical vertices, with two triangles and two pentagons meeting at each, and sixty identical edges, each separating a triangle from a pentagon (fig. 3.27). As was the case with all previously analysed geometrical studies in the workshop sketchbook, none of the figures were drawn with the aid of a ruler or following precise measurements but rather seem to have been copied after existing drawings or hesitantly drawn following written instructions.

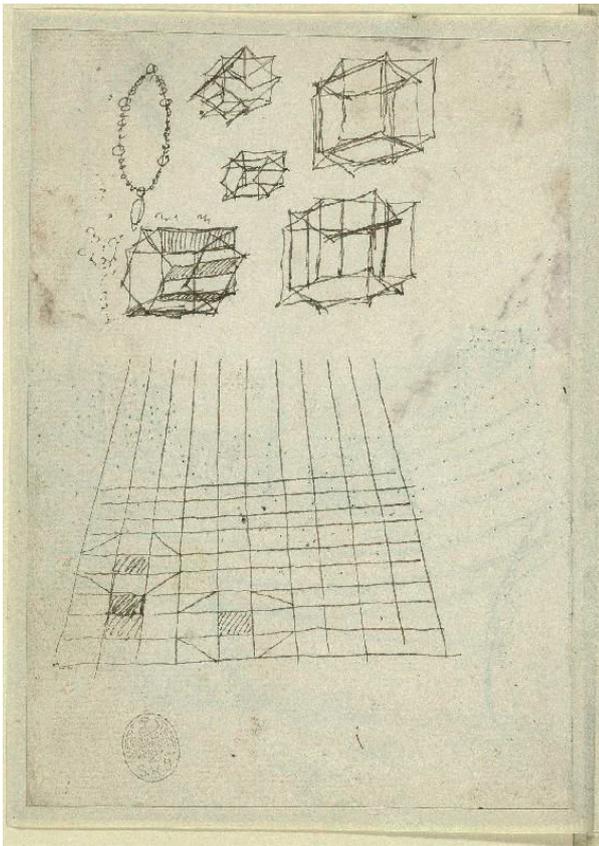
Although certain Dutch treatises on geometry - such as Thomas van der Noot's book on practical geometry *Die Waerachtige Const der Geometrien* (Brussels, 1513) - had been circulating in the Low Countries, the presence of these polyhedra in the sketchbook is one of the earliest appearances of them in the Low Countries.⁴¹² A first source for this theory, might have been a printed edition of Euclid's *Elements*, which had been available in a printed edition since Erhard Ratdolt's *editio princeps* (Venice, 1482).⁴¹³ The drawing on the upper right corner of fol. 1v, depicting a hexagon or heptagon inscribed within a circle (fig. 3.1), could be based upon the exercises as described in Euclid's

⁴¹⁰ Rupprich 1956, vol. 1, p. 44; Morrall 2010, p. 100; Ashcroft 2017, vol. 1, p. 140.

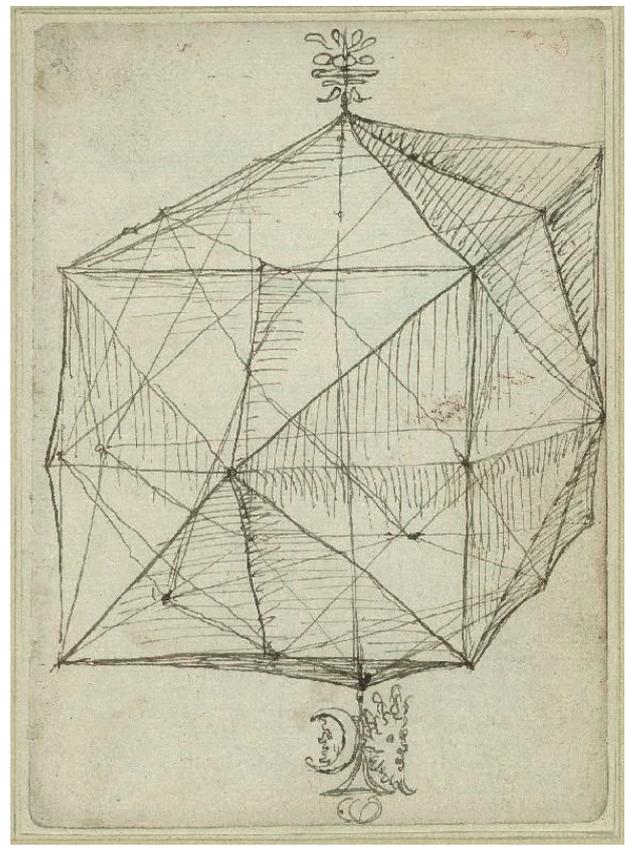
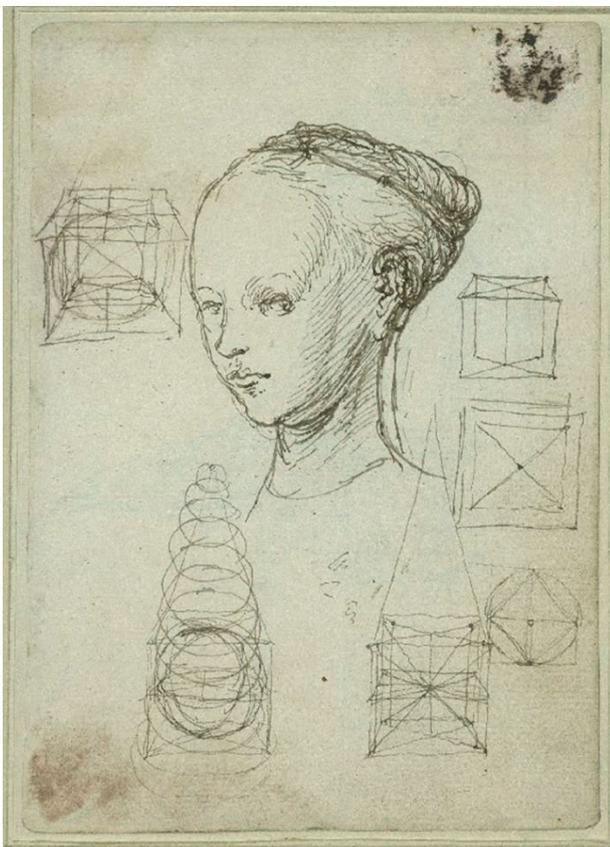
⁴¹¹ Rupprich 1956, vol. 1, p. 103; Ashcroft 2017, vol 2, p. 712, no. 182.7.

⁴¹² Bockstaele 1984; Van de Vijver 2006, p. 3173.

⁴¹³ Reske 2003, with further literature.



Figs. 3.24 and 3.25. Jacob Cornelisz. Van Oostanen (workshop), *The Amsterdam Sketchbook*, 1520-1533. Fols. 3v and 16v. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. 79 C 2a.



Figs. 3.26 and 3.27. Jacob Cornelisz. Van Oostanen (workshop), *The Amsterdam Sketchbook*, 1520-1533. Fols. 41r and 45r. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. 79 C 2a.

Elements (fig. 3.28).⁴¹⁴ Although the exact nature of the depicted polygons in the drawing is difficult to read, the figure might correspond either to Book XII.1 (explaining the relationship between polygons inscribed in circles), or Book XIII.11 (which deals with diameters of a pentagon inscribed in a circle).⁴¹⁵ The latter seems more plausible since this is also the chapter in the *Elements* which focusses on the construction of polyhedral figures. Of course, Euclid need not be the prime source for the draftsman of the sketchbook since many of Euclid's principles were included in Dürer's *Underweysung der Messung*. In his geometrical treatise Dürer explains how to inscribe equilateral polygons within a circle and illustrates his explanations with engravings which depict the construction of a hexagon and a heptagon.⁴¹⁶ It seems likely that the draftsman was practicing his geometrical drawing skills with a copy of Dürer's treatise resting beside him. Additionally, a third Euclidean exercise in the sketchbook, on folio 7r, corresponds rather closely to Dürer's image of overlapping, rotating squares on fol. F4v (fig. 3.29).

The polyhedra in the sketchbook show little resemblance to the ones described in the final chapter of Dürer's treatise, yet they may have been attempts inspired by Dürer's theoretical writings. An important contact in the intellectual network of Van Oostanen in Amsterdam was Pompeius Occo (1483-1537), a wealthy German banker who had moved to Amsterdam in 1510 to promote the interests of the Fugger family in the city.⁴¹⁷ His house 'The Paradise', which was located directly opposite the Van Oostanen workshop in the Kalverstraat, was a centre of humanist intellect in the city.⁴¹⁸ His uncle was the Augsburg Fugger banker Adolph Occo (1463-1503), who was a lifelong friend of the Netherlandish humanist Rudolph Agricola. In one letter, dated 19 October 1480, Agricola makes

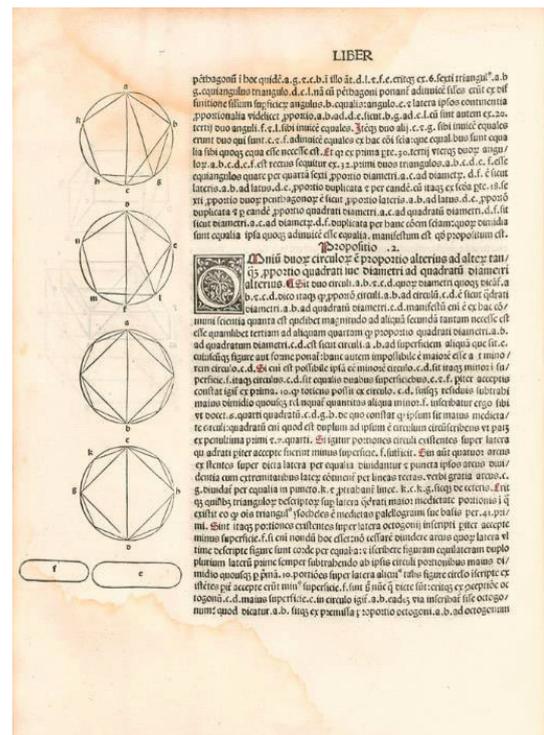


Fig. 3.28. Euclid, *Elements*, Erhard Rattdolt, Venice, 1482. Book XII, proposal 1, fol. 106r. Bayerische Staatsbibliothek Munchen. Photo: © Bayerische Staatsbibliothek.

⁴¹⁴ Counting the corners of the figure, the draftsman seems to have intended to draw a heptagon, rather than a hexagon.

⁴¹⁵ Euclid, *Elements*, pp. 338, 378-80.

⁴¹⁶ Dürer, *Unterweysung*, fol. 27v. Also see Van Tuinen 2014, vol. 2, pp. 41-43. The same polygon constructions already featured in Mathes Roriczer's *Geometria Deutsch*, fol. 3r.

⁴¹⁷ On Occo, see Sterck 1934, pp. 23-30; Nübel 1972.

⁴¹⁸ On the house of Occo, see Simons 2014.

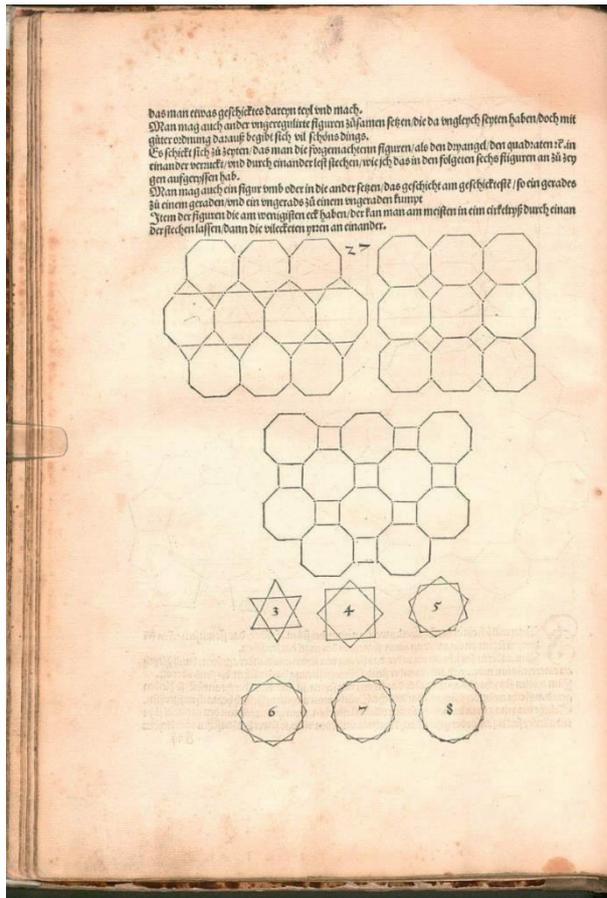


Fig. 3.29. Albrecht Dürer, *Underweysung der Messung*. Hieronymus Andreae, Nuremberg 1525. Fol. F4v. Bayerische Staatsbibliothek Munich. Photo: © Bayerische Staatsbibliothek.

a reference to Vitruvius; an indication that the humanist network around Occo shared a keen interest in architectural and geometrical theory.⁴¹⁹ As a bibliophile Pompeius was able to inherit half of his Augsburg uncle's library and obtain the personal library of Agricola.⁴²⁰ During his lifespan, Occo would continue to collect printed and illuminated books, and he would promote printing activities in the city. Occo would prove to be one of the most important patrons of Van Oostsanen as he was a valuable contact for various other commissions.⁴²¹ Also part of this intellectual network was the Dutch humanist Alardus of Amsterdam (1491-1544), famous for publishing the works of Agricola and Erasmus and a promoter of the works of Jan van Scorel, with whom he attended the Latin School in Alkmaar in the years 1510-11.⁴²² Like Occo, Alardus had a strong interest in architecture and local antiquities. Given the Fugger connection, the humanist network around Occo and his role as Van Oostsanen's patron and neighbour, it

seems likely that Van Oostsanen and his students were able to gain access to an early edition of Dürer's treatise on geometry.⁴²³

3.4. Contextualisation

The diverse typology of drawings present in the Amsterdam sketchbook gives testimony to the importance of architectural design and geometrical knowledge in a Netherlandish painter's workshop. Whether the sketchbook is representative for common workshop practice in the Low Countries by the 1520s is difficult to determine, since there is little contemporary material which survived to compare

⁴¹⁹ Akkerman & Van der Laan 2016, pp. 42-43, 213-18

⁴²⁰ Sterck 1934, p. 21.

⁴²¹ Meuwissen & Van Leerdam 2011, pp. 341-43; Amsterdam 2014, pp. 50, 94.

⁴²² Sterck 1934, pp. 1-17; Bruyn 1955, pp.194-207; De Graaf 1958.

⁴²³ Van Tuinen 2014, vol. 2, p. 26; Van Tuinen 2017, pp. 60-62. The Fugger connection may also explain why Jan Van Scorel, one of Van Oostsanen's pupils, had gained access to the workshop of Dürer in Nuremberg while staying in Germany.

it with. The architectural, perspectival, and geometrical study sketches are not merely applicable to painted representations of architecture but could function as design drawings for sculpture, woodcarving, goldsmithing, cartography or architectural design. With its diversity of disciplinary fields, the Amsterdam sketchbook can possibly be placed within a longer tradition of artist's sketchbook practice.⁴²⁴ The fascination of the draftsman with (mostly) Antique architectural ornament aligns with many similar Italian sketchbooks and workshop drawings such as the Codex Escurianlensis or the Rotterdam sketchbook associated with the workshop of Benozzo Gozzoli from the 1460s, in which cornices, candelabra ornament, capitals and ornamental foliage are omnipresent.⁴²⁵ They were elements of design not only useful for the local painter's workshop but also applicable in other media. With the inclusion of a considerable number of exercises in Euclidean geometry, proportions and perspectival studies, the Amsterdam sketchbook seems to be representative for a new way of thinking about artistic practice in which geometrical know-how plays a defining element. The most obvious contemporary comparison of the sketchbook as a true Renaissance sketchbook would be the analogy with Leonardo's scientific sketchbook practice for who the study of geometry, perspective and proportions was equally essential to the new elevated position that painting was to take on mount Parnassus.⁴²⁶ However, conceptually there is a huge difference between these two drawing and designing practices. Where Leonardo is scientifically invested into the underlying technical and geometrical mechanisms of his technical drawings and develops his thinking process by drawing, the Amsterdam draftsman working in Van Oostsanen's workshop is clearly learning or copying from previous seen examples or oral instructions. Most of the geometrical constructions in the sketchbook – such as ad quadratum ground plans or polyhedral stereoscopy – rely on a step-by-step design process in which the use of compass and ruler are indispensable. Nevertheless, neither instruments were used. Perhaps the best comparison for its multiplicity and the use of geometry is the famous sketchbook produced by Villard de Honnecourt, dated c. 1230.⁴²⁷ Although the sketchbook has often been regarded as the work of a traveling master mason, in more recent scholarship this view has been

⁴²⁴ For other examples of previous and contemporary sketchbooks, see Heuer 2014.

⁴²⁵ Rotterdam, Museum Boijmans Van Beuningen, inv. I.562. On these Italian sketchbooks, also see Ames-Lewis 1981, pp. 63-90; Elen 1995; Scheller 1995, pp. 371-77; Ames-Lewis 1998; Elen 2012.

⁴²⁶ On Leonardo's sketchbooks, see Kemp 1989; Kemp 1990, pp. 44-52; Zwijnenberg 1999. With further literature.

⁴²⁷ For Honnecourt, see Barnes 1982; Barnes 2009, with further literature.

considerably refined.⁴²⁸ The knowledge present in the thirteenth-century French sketchbook stretches from mechanics, architectural design techniques, land surveying, stereotomy and anatomic proportions (fig. 3.30). The main research focus on the professional identity of the draftsman of the booklet seems to become irrelevant if we can consider architectural design as something which can be entrusted to anyone who proved to be a talented draftsman and especially equipped with knowledge of geometry. With this transdisciplinary range of drawings, the manuscript displays all the applications of Euclidian geometrical principles for a wide audience of Medieval professional craftsmen which included not only masons, but also woodworkers, goldsmiths, stonecutters, and land surveyors.⁴²⁹



Fig. 3.29. Villard de Honnecourt, *Geometric figures*, sketchbook, c.1230. Fol. 18v. Paris, Bibliothèque Nationale de France, Département des Manuscrits français, Ms. Fr 19093. Photo: © Gallica.

It is no coincidence that many of the late fifteenth- and early sixteenth century treatises on geometry or architectural theory are addressed to this specific group of designers. When Pieter Coecke van Aelst published his *Renerele Gegelen* in 1539, he dedicated his Serlio translation to “the lovers of Architecture” (*aenden liefhebbers der Architecture*). In a small laudatory poem to Coecke on the same page, the erudite city clerk of Antwerp Cornelis Grapheus (1584-1558) is more specific on the intended readership when he indicates that painters, sculptors, architects, stone cutters and goldsmiths will be very pleased with this publication.⁴³⁰ The Architecture mentioned by Coecke (and replaced in his 1549 re-edition by the more vernacular term ‘metselrije’) does not specifically refer to the design of buildings but had a broader meaning of all design related to which architectural and geometrical principles could be applied. In his smaller, more affordable Vitruvian booklet, *Die Inventie der Colommen* (1539) Coecke also mentions these fellow-craftsmen as the main audience: “For painters, sculptors, stonecutters, etc. and all who take pleasure from the antique building manner”.⁴³¹ With

⁴²⁸ Lassus 1858; Branner 1963; Bucher 1977; Barnes 1982; Barnes 1989; Barnes 2009; Bork 2011a, pp. 31-35.

⁴²⁹ Zenner 2002.

⁴³⁰ ‘Schilders, Beeldsnijders, Architecten vroec / Ende oock ghy Steenbouwer, ghy Smeden sterck / Liefhebbers der Symmetrien coste soet / Compt hier, compt besier dit costlike nieuwe werck’. Coecke Van Aelst, 1539b, Fol. Iv.

⁴³¹ ‘Voer schilders, beeltsniders, steenhouders, etc. ende allen die ghenuegte hebben in edificien der Antiquen’. Coecke van Aelst 1539a, fol. 1; Rolf 1978; De Jonge 1998; De Jonge 2004; De Jonge 2007, p.41.

these dedicatory introductions Coecke placed himself in a long line of earlier and contemporary authors and theorists who had addressed their work to the wide range of craftsmen who were involved in architectural design and its required geometry. Although Coecke's reference to the antique architecture makes him seem up to date with the novel Vitruvian principles and style, the concept of addressing books on architectural design to a wide range of craftsmen, was not novel. Hans Schmuttermayer had a similar audience in mind when he addressed his booklet on Gothic design principles to "all masters and journeymen who use this high and liberal art of geometry".⁴³² It is especially this alignment of 'art' with geometry as part of the quadrivium of the liberal arts which makes these passages so interesting and relevant in relationship to the distribution of geometrical design.

When Albrecht Dürer published his *Underweysung der Messung*, he was even more unambiguous about the connection between art and geometry as he specified in the dedicatory epistle who might benefit from his book: "*For the benefit of all who seek after art, and for the use not only of painters but also goldsmiths, sculptors, stonemasons, cabinet makers, and all who have need of geometry*".⁴³³ So when Dürer mentions on the title page of the same treatise that his book is intended for "all lovers of art" (*zu allen kunstlieb habenden*), he does not mean those connoisseurs who appreciate the Fine Arts, but rather those who practice the liberal arts.⁴³⁴ The distinction between those two notions of 'art', only started to be developed during the course of the sixteenth century. Dürer, who was familiar with Schmuttermayer's booklet, also followed the same practice in which painting, sculpture, metalwork, stone cutting, carpentry and architecture were embedded in a theoretical foundation of Geometry.⁴³⁵ In a letter by Dürer in 1523, addressed to an anonymous (ghost)writer with whom he wrote his *Four Books on Human Proportion*, the artist stresses that "this proportion, if it is understood, may be used by painters, sculptors in wood and stone, goldsmiths, metal-casters, potters who decorate with clay, or all those who set out to make pictures".⁴³⁶ Although this address is a trope with a long history, the inclusion of painters within this list of craftsmen was novel and spoke for a conscious strategy to elevate the status of painting to a higher level thanks to

⁴³² Shelby 1977, p. 58.

⁴³³ '(...) vnd allen kuenstbegirigen zuo guet geschicht / vnd auch nicht alleyn den maleren / sonder Goldschmidten Bildhaueren Steynmetzen Schreyneren vnd allen den so sich des maß gebrauchen dienstlich seyn mag'. Rupprich 1956, vol. 1, pp. 114-16; Ashcroft 2017, p. 777.

⁴³⁴ On Dürer's conception of art, see Panofsky 1948, pp. 242-46.

⁴³⁵ Both Schmuttermayer and Albrecht Dürer the Elder were one of the more prosperous goldsmiths in Nuremberg and were acquainted with each other. They are both named in a 1487 document, stating that a certain Hermann Laisner was in debt to both Hans Schmuttermayer and Albrecht Dürer (the Elder). This indicates that both were working on a commission together. Shelby 1977, p. 29. On Schmuttermayer's influence on Dürer's *Underweysung der Messung*, see Eser 2012a, p. 25.

⁴³⁶ 'woll dyse proportzian, so sie ferstanden wijrdett, ge-praucht mag werden [von] mollern, pildhauern m van holtz [ode]r steinen, oder goltschmiten, metall [gies]sern, haffner, dy van erden streichen, [oder]al, dy bilder fürnemen zu machen'. Rupprich 1956, vol. I, p. 101; Ashcroft 2017, pp. 709-10.

the newly acquired geometrical know-how. It is no coincidence that the Amsterdam sketchbook, and its prominence of geometry was used within the workshop of one of the major figures of the early Netherlandish print production. The European production of printed images not only led to an unseen level of dissemination of visual sources and technical information; it was also quintessential in the interplay between different professional groups (see chapters 5 and 6).

4. Mapping expertise – The painter-cartographer in the Low Countries

In 1456, in his biographical description of Jan Van Eyck, the Genoese humanist Bartolommeo Fazio described a world map, or depiction of the world by the Bruges “prince of painters” as “*a circular representation of the world, which he painted for Philip, Prince of the Belgians, and it is thought that no work has been done more perfectly in our time; you may distinguish in it not only the places and the lie of continents, but also, by measurement, the distance between places*”.⁴³⁷ Earlier in the text, Fazio praises Van Eyck for being skilled in “geometry and such arts”.⁴³⁸ He received the same praise from the Burgundian Duke as well. When the Chamber of Account of Lille refused to pay the court painter’s wage in 1435, Philip the Good interfered personally by praising Van Eyck for his “art and science”, which would be required for certain large projects in the near future.⁴³⁹ Although the attribution of Philip the Good’s *Mappa Mondo* has been doubted in recent years, the passage on Van Eyck’s cartographical skills in combination with geometrical knowledge remains significant as it forms the key factor to understand the correlation between painters and cartography.⁴⁴⁰

By combining triangulation, landscape painting and design methods, painters were often the first to be commissioned ambitious cartographical and land-surveying endeavors by courtly or civic commissioners. The correlation between painting and map making goes back as early as antiquity and was reappraised with the discovery, translation, and publication of Ptolemy’s *Geography* by the beginning of the fifteenth century.⁴⁴¹ The Alexandrian astronomer and geographer makes a clear distinction between the terms *Geography* and *Chorography*, which he defines as follows:

“Geography is the imitation of the picture of all the parts of the world that are known and all those things which are collectively joined to that world. It differs from chorography in that chorography divides places into parts and constitutes each thing singularly and describes everything minutely so that we can understand the harbors, the villages, the people, the course of smaller rivers diverging from

⁴³⁷ *‘Eius est mundi comprehensio orbiculari forma. Quam philippo belgarum principi pinxit. Quo nullum consummatius opus nostra aetate factum putatur. In quo non solum loca situsque regionum. Sed etiam locorum distantiam metiendo dignoscas’.* Baxandall 1964, p. 102. For Van Eyck’s *Mappa Mondo*, see Sterling 1976; Dhanens 1980; Steppe 1983; Paviot 1991; Martens 2020, p. 142.

⁴³⁸ *(...) leterarum nonnihil doctus. Geometriae praesertim et aerum atrium quae ad picturae ornamentum accederent.’* Baxandall 1964, p. 102. On Van Eyck’s scientific interests, also see De Mey 2012; Martens 2020.

⁴³⁹ Weale 1908a, doc. 24; Steppe 1983, p. 93; Borchert 2012a, p. 87.

⁴⁴⁰ The map mentioned by Fazio has been reattributed to the Burgundian Cosmographer Guillaume Hobit, see Paviot 1991.

⁴⁴¹ Alpers 1983, pp. 133-136; Büttner 2000, pp. 50-54; Büttner 2006, pp. 17-19.

larger ones, and similar things. [...] Geography imitates the whole. Whence [Chorography] requires the painting of places, and no one can do it well unless he is a good painter".⁴⁴²

By combining the Greek *Χῶρος* (*choros*) and *γραφία* (*graphia*), Chorography literally refers to 'the representation of place and space'. According to Ptolemy, it is a more painterly and describing approach to the representation of the world – close to landscape painting - whereas geography is a mathematical approach. During the fifteenth- and sixteenth centuries, this distinction between Geography and Chorography became a common subject of learned debate, also in the Low Countries.⁴⁴³ The Ptolemaic revival during the second half of the fifteenth century is sometimes described as a link between medieval mapmaking and a more modern perception of the world through mathematically and geometrically measurable methods.⁴⁴⁴ Since knowledge of triangulation is the key factor in scientifically-based mapmaking, it should come as no surprise that one of the early known examples of a painter-cartographer can also be interpreted as one of the first known painter-architects. In a letter dated October 1336, the Venetian statesman and geographer Marino Senudo (1260-1338), reminds his correspondent Count William of Hainaut (1285-1337) of the fact that he must still send him the plan of Florence by the hand of Giotto.⁴⁴⁵ Giotto's involvement in a cartographic representation of his city is closely associated to his appointment as city architect of Florence only two years earlier, in 1334. In the document in which he is commissioned to make a design for the Florence Campanile, he is not only praised as 'the world's most famous painter', but also for his *Scientia and Doctrina*.⁴⁴⁶ Since such a map no longer exists, we are not able to assess the geometrical precision and applications of his *scientia* that went into making it. More certainty on the scientific approach can be gained from Leon Battista Alberti's experiments with mapmaking. Alberti's theoretical and practical interest in geometry, optics, architecture, and perspective led him to various experiments on how to represent a three-dimensional space onto a two-dimensional surface. Shortly after describing the workings of basic Euclidean geometry and linear perspective in his *De Pictura* (1435), Alberti carried out a topographical survey of the city of Rome that, he claims, was conducted as accurately as possible using "mathematical tools" such as a circular odometer. Around 1450 he published his findings in a small book, entitled *Descriptio Urbis Romæ*.⁴⁴⁷ Many additional contemporary European examples of

⁴⁴² Ptolemy, *Geographia* 1.1., ed. and trans. by J.L. Berggren and A. Jones, *Ptolemy's Geography: An Annotated Translation of the Theoretical Chapters*, Princeton 2001.

⁴⁴³ See, for example the introduction of the first book of Braun and Hogenberg's *Civitates Orbis Terrarum*, where it is defended that the Chorographic representations in the book are of scientific value as they are complementary to Ortelius' more geographical representations. Nutti 1994, pp. 106-108.

⁴⁴⁴ Miller 2007, pp. 27-29.

⁴⁴⁵ Degenhard & Schmitt 1973, p. 6; Büttner 2000, p. 74.

⁴⁴⁶ Trachtenberg 1971, p. 182, doc. 1.

⁴⁴⁷ In the booklet Alberti describes the odometer as a drawing tool composed of two graduated parts: a circle, which Alberti calls horizon, and its revolving spoke, the radius. Each reader of his book was expected to use this instrument to draw their own personal copy of Alberti's original map of Rome, based on a series of coordinates. The result would have been an orthographic ground plan. Pinto 1976, pp.36-38; Furno & Carpo 2000.

artistic involvement in mapmaking can be cited, such as Leonardo's orthographical projection of Imola of 1502⁴⁴⁸, or Albrecht Dürer's involvement in Hartmann Schedel's celebrated *Nuremberg Chronicle*, first published in 1493.⁴⁴⁹ Yet it was not only major figures of European Renaissance who were involved in the development of maps and cartographic projects.

As was already touched upon in the previous chapter, the land-surveyor was an indispensable intermediate between the geometrical and arithmetical thinking of the architect and the pictorial world of the painter. This non-categorizable professional go-between made the field of early cartography a common ground where the skills of the master mason (or land surveyor) met those of the painter, and eventually merged. Mapmaking was commissioned to the artist or artisan who could demonstrate the necessary skill set, often combining the qualities of Ptolemy's description of the geographer (geometrical knowledge) and the chorographer (the ability to paint or draw well). By the dawn of the sixteenth century, this put a new generation of geometrically skilled artists in a very advantageous position. Additionally, artists' involvement in mapmaking was encouraged by an antique authority such as Ptolemy whose definition of chorography specifically mentions the skills of the artist. In the following chapter we will explore the issue of the 'painter-cartographer' in the Low Countries as an often forgotten but yet crucial step towards the rise of autonomous professional cartographers, such as Jacob van Deventer (1505-1575), Abraham Ortelius (1527-1598) and Gerard Mercator (1512-1594), by the middle of the sixteenth century.⁴⁵⁰ Throughout the first half of the sixteenth century, the depiction of the physical world by Netherlandish artists evolved from the mere inclusion of individualized town portraits as a backdrop to narrative paintings or portraits, towards the production of maps, thus giving shape to the representation conventions of cartography.⁴⁵¹ Similar and parallel to the increasing involvement of artists in architectural endeavors, their participation on cartographical projects relies heavily on their interest in and background knowledge of trigonometry and the basic Euclidean principles. Although the involvement of Netherlandish artists on cartographical projects has long been acknowledged, the phenomenon has received little attention in relation to the dissemination of technical knowledge and the shifting positions in professional identity of these artists.⁴⁵²

⁴⁴⁸ Kemp 1981, pp. 228-231.

⁴⁴⁹ The project was published by Dürer's godfather Anton Koberger. Panofsky 1943, p. 19; Sladeczek 1965; Mett 1996; Worz 2006, p. 73.

⁴⁵⁰ Our focus is on mapmaking which requires measurement and scientific data to achieve the cartographic representation. Typologically, this means that the city portrait such as chorographic profile views of cities are not being considered in this chapter.

⁴⁵¹ On this evolution in the Low Countries, especially see De Rock 2017.

⁴⁵² Often the phenomenon of painters as mapmakers is touched upon in relation to the development of the landscape as an individual genre in Netherlandish art: Friedländer 1955, pp. 73-80; Alpers 1983, pp. 133-36; Gibson

4.1. Mapping against decline: Bruges mapmaking

By the end of the fifteenth century, Bruges' economic prosperity had gradually started to decline as its role as European commercial center had been taken over by the developing trade market of Antwerp. Although this shift is mainly the result of a severe political crisis following local revolt against Maximilian I of Austria during the 1480s, the diminishing accessibility of the Bruges port by the silting up of the Zwin area was a major concern for the municipality.⁴⁵³ Plans and projects that aimed to literally, as it were, turn the tide span most of the sixteenth century. First, Bruges attempted to deepen the existing channel between Bruges and the Zwin area. Hoping to restore their economic aorta, the city of Bruges had resolved to build a new canal (*'nieuwe ghedelf'*) in 1500 between the Zwin and the Honte. By connecting the main passage of the Zwin to the Scheldt, across Oostburg and Passegeule, it was thought that the ebb and tide could be lengthened at the Zwin estuary, and thus regain the access to the port of Bruges for sea ships.⁴⁵⁴ The canal was completed in 1505, without the anticipated result. Eventually a new canal was dug between Bruges and Sluis between 1548 and 1566.⁴⁵⁵ Although these hydrological plans and drawings were sometimes commissioned to municipal land surveyors, the sixteenth century saw an increase in painters being paid to paint the plans.

Between 1480 and 1483 Bruges officials paid the painter Jan Fabriaen for several maps that had 'to show the hydrology of the city'.⁴⁵⁶ The 1499-1500 city accounts mention several drawings (*patroon* and *berwerpen*) commissioned to painters for the project. A first payment was made to a painter named, Cornelis Fieric in 1499.⁴⁵⁷ One year later, a second unnamed painter was paid for drawing a plan of the Zwin area first on paper and later on parchment.⁴⁵⁸ In 1501-02, the Bruges painter Jan de Hervy (c. 1450-1509) was paid 3 lb. gr. and 10 shillings for "painting and portraying in

1989, p. 54; Büttner 2000, pp. 50-54; Büttner 2006, pp. 17-19; Bakker 2004, pp. 170-86. In a few instances the subject is treated as a significant step in the development of autonomous cartography: Nutti 1994; Nutti 2000; Buisseret 2000; De Rock 2017

⁴⁵³ Maximilian revenged his imprisonment during the Bruges rebellion by forcing all foreign merchants to leave the city in 1488, thus cutting the city off from all trade and income. Many foreign merchants relocated to Antwerp, including the English wool traders, who were so crucial to the Bruges textile industry.; Brulez 1970; Van Uytven 1995; Bolton & Bruscoli 2008; Dumolyn 2010; Haemers 2015.

⁴⁵⁴ Ryckaert & Van de Walle 1982; Parmentier 1995.

⁴⁵⁵ Ryckaert & Vandewalle 1982, pp. 52-70; Deneweth & Vandamme 2017, p. 10.

⁴⁵⁶ Dewilde, Dumolyn, Lambert & Van Nieuwenhuyze 2018.

⁴⁵⁷ 'Item betaelt, Cornelis Fieric scildere, ter cause van eenen patroon by hem ghemaect nopende den ghedelve t' Oostburch'. Gillidots-Van Severen 1895, p. 54

⁴⁵⁸ 'Betaelt eenen scildere voor twee bewerpen by hem ghemaect van den ghedelve van den Zwene, deene in papiere, dandere in perchamine'. Gillidots-Van Severen 1895, p. 52. The paper drawing mentioned in the account can perhaps be associated to a paper drawing of the Zwin area, which depicts an enlarged portion of Jan de Hervy's drawing of 1501. The way buildings and landscape are depicted are quite similar. Given the fact that the new canal is only drawn in a sketchy manner, this drawing might have been an earlier drawing stage of Jan de Hervy. Bruges, City Archive, Maps and Plans, inv. 22. Also see, Lobelle-Caluwé 1998b, p. 171, no 150; Bruges 1998, p. 108, no. 29.

oil paint of the new canal”.⁴⁵⁹ That year de Hervy was also asked to “enlarge the writing on the map of the canal”. Seven years later, in 1508-09, the painter was paid a third time for inspecting the works at Biervliet and for making a “*portray*” of the new canal. Ann Roberts convincingly associated these documents with a map in the collection of the Groeninge Museum in Bruges (fig. 4.1).⁴⁶⁰ The map, painted in oil and tempera on canvas, depicts a chorographic bird’s-eye view on the coastal area north of Bruges, with a special focus on the location of cities, windmills and water ways. On a scientific level, the distances and proportions of the map are not measurable and both scale and perspective show a lack of accurate geometrical plotting. It has been suggested that the pictorial quality is related to the function of the drawing as a legal document used during a hearing attended by landowners, surveyors and court- and city officials during preparation phases of the new canal project.⁴⁶¹ Therefore it ought to have been legible to specialists and laymen alike. The almost anecdotal details such as the men digging the canal, place this drawing in the same function category as architectural presentation drawings such as that for the Ghent Belfry tower (fig. 2.19) or Joos Metsys’ presentation drawing (fig. 2.25), which also seemed to address a double audience of professionals and laymen. As the project of Fieric and de Hervy turned out to be unsuccessful, other solutions were being sought to prevent Bruges from its ongoing economic decline. The Bruges city accounts of 1513-14 mention a payment to renowned painter Jan Provoost (c. 1465-1529) for eight detailed maps of the Zwin area.⁴⁶² The painter

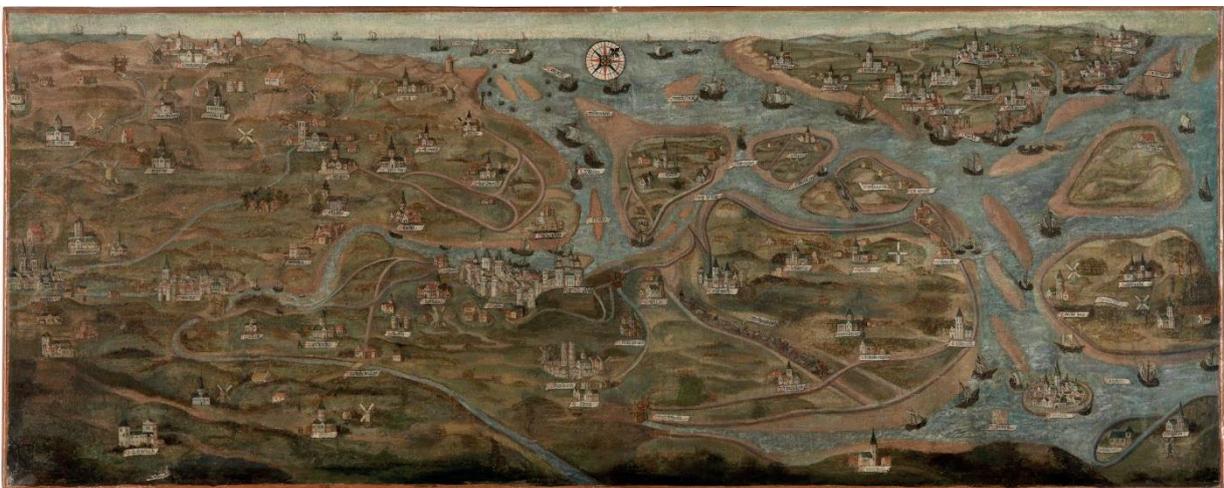


Fig. 4.1. Jan de Hervy, *Map of the Zwin area*. Oil on canvas, 43,5 x 108,5 cm. Bruges, Groeninge Museum, inv.o.1382.

Photo: © Lukasweb.

⁴⁵⁹ *Item Jan dervy voor tschildern ende in pourtrature stellene van holye vaerwe nienwe bedelf, ende ooc andere zaken iii L x S groten*. SAB, Stadsrekening, 1501-02, fol. 80v.; Roberts 1991, p. 83, n. 7.

⁴⁶⁰ Bruges, Groeningemuseum, inv. O.1382.

⁴⁶¹ Roberts 1991, p. 84.

⁴⁶² *Item betaelt Jan Provost, acht quarten inhoudende den leghere van den Zwene, den gbestanden van den Zwarte Gate, Passegebeule en de nieuwen bedelve, mits de polders, prochien ende steden daer ontrent*, Mertens 1982, p. 229. No existing maps have been convincingly connected with this payment.

was at the height of his career as in the same year he was also first *Vinder* of the Bruges guild of St. Luke.⁴⁶³

Few new developments seem to have been undertaken until Lanceloot Blondeel was contracted in 1546 to design new maps of the Zwin area.⁴⁶⁴ The painter was paid 2 lb. gr. for the design of a map made in oil paint.⁴⁶⁵ This is most likely the plan which is signed and dated: *Concept ende Ordonantie van Landsloot Blondeel de Schilder. A° 1546* (fig. 4.2).⁴⁶⁶ The map represents the area around Bruges and offers a solution to the silting by plotting a canal between Damme and Sluis. In its rendering the map shows a more objective approach by the application of a more precise scale. With the depiction of cities, towns and watermills, the map comes close to the cartographic formulaic typology of Jacob van Deventer.⁴⁶⁷ Letters ranging from A to X are alphabetically written along the course of the winding canal. They also

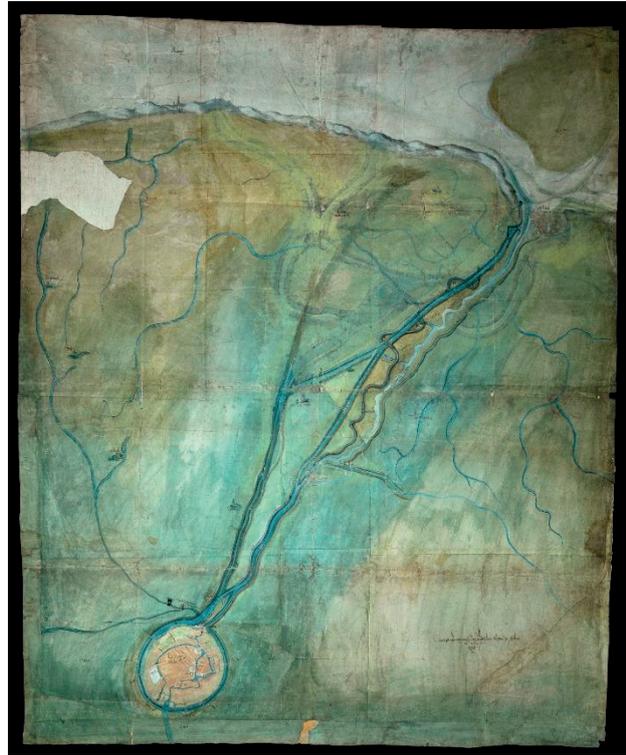


Fig. 4.2. Lanceloot Blondeel, “*Concept ende Ordonantie*”, 1541. Watercolour on paper, 171 x 140 cm. Bruges, City Archives, inv.14. Photo: © Hugo Maertens.

indicate a use of the map as a legal instrument during the planning stage of the Zwin project. The hydrological project stagnated following complaints of local landowners.⁴⁶⁸ In 1548-49, yet another painter was involved in mapping the Zwin area: Joos van der Beke, who was paid to design two maps of the Zwin coasts line and the river course in the context of a new mapping campaign.⁴⁶⁹

⁴⁶³ Parmentier 1941, p. 97.

⁴⁶⁴ Parmentier 1995, pp. 64-69; Jansen 1998.

⁴⁶⁵ Weale 1908a, p. 297, n° 54.

⁴⁶⁶ A second design, which cannot be fully attributed to Blondeel, is closely related to this first *Concept*. It shows an even more drastic solution by constructing a new harbor in Heist – southwest from the old river’s estuary. Bruges, City Archive, Maps and Plans, inv. 15.

⁴⁶⁷ Rutte & Vannieuwenhuyze 2018, pp. 31-35.

⁴⁶⁸ Gilliodts-Van Severen 1895, p. 193.

⁴⁶⁹ ‘*int quartier van Gatemesse omme schilderijen te bewerpene stelling de ghelegentbede vanden quartierien ende lande daeromtrent ghelegben ende ooc vanden loop van de zee. Ende daerof ghemaect ende ghelevert twee quaerten*’. Mertens 1982, p. 231; Huvenne 1984, p. 25. This Joos van der Beke is not to be confused with the Antwerp Joos van der Beke (Joos van Cleve), who had already died in 1540-41. Hand 2004, p. 5; Hand & Leeftang 2011, p. 21. The Bruges Joos Van der Beke became a master in the Guild of St Luke in 1530. Parmentier 1951, pp. 155-56.



Fig. 4.3. Pieter Pourbus, *Large Map of Brugse Vrije* (fragment), 1571. Oil on Canvas, 151 x 322,5 cm. Bruges, Musea Brugge, inv. GRO022.I. Photo: © Lukasweb.

In 1549 Pieter Pourbus (1523/24 – 1584) was appointed as a cartographer in the context of the resurgence of the Bruges economy and its harbor.⁴⁷⁰ Throughout his prolific career, Pourbus received no less than twenty-eight commissions for cartographic production, of which only six survive.⁴⁷¹ They all show a great variety in function and rendering, and they provide an idea of the painter’s geometrical plotting abilities. On December 13, 1561 he was contacted by the magistrate of the Franc of Bruges (*‘Brugse Vrije’*) to draft a large map regarding the legislative area of the Brugse Vrije. The commission stipulated the creation of a map with all the jurisdictions of the Vrije, including ‘all the roads, bridges, villages and towns.’⁴⁷² The design of the map had to be based upon an otherwise unspecified map of Mons. The accounts of the Vrije provide us with a detailed view on the working process of the painter, which span a period of ten years. His preparation included field research and land surveying, the production of smaller regional maps, and finally combining dozens of preparatory drawings into the final map on canvas, measuring 323 x 651 cm (127 x 256 in).⁴⁷³ The “large map”, as it was commonly referred to in the documents, shows a detailed orthogonal view of Bruges and its surroundings with faithful representation of geographical and topographical features (fig. 4.3). The final payment for the map was made to the painter in 1571 and was recognized as a major cartographic feat. Van Mander lists the map among his other artistic achievements:

⁴⁷⁰ Pourbus probably had the advantage of being the son-in-law of Lanceloot Blondeel.

⁴⁷¹ Huvenne 1984, p. 227, no. 41.

⁴⁷² *‘Gheresolveert te doen maeken een caerte van tghebele lant vande Vrijen, appendantschen ende contribuabile designerende ende stellende tghescheet van de jurisdictie zo verre tzelve meughelick wert alle heerveghen, wateren, bruggen, dorpen ende stede zulkx gheselt es in een caerte ghemaect van Bergh ambact’*. Brugs Rijksarchief, Vrije, Reg. 25, Resoluties 1555-1579, fol. 151v.; Published in Huvenne 1984, p. 287.

⁴⁷³ De Smet 1947, p. 34; Huvenne 1984, pp. 287-289.

*“He was also a good cosmographer or surveyor and for the gentlemen of the Vrije van Brugge he made a large canvas in oils of the countryside around the Vrije with all the villages and places which it comprises; but because he had primed it too thickly with a glue ground and it was frequently rolled up and rolled out, it cracked and flaked off in many places.”*⁴⁷⁴

The continuous wear and tear described by Van Mander caused the magistrates to commission a copy after Pourbus’ cartographic painting by Pieter II Claeissins (1539/1540 – 1623), already in 1597.⁴⁷⁵

In 1563 Pourbus was paid by the prosperous Cistercian *Ten Duinen* Abbey for surveying and drawing a map of the abbey and its surroundings, which would result in one of most peculiar mapping projects in terms of its projection methods.⁴⁷⁶ Due to the continuous relocation of the coastal dunes, the abbey became threatened and requests were made by the abbot Antonis Wydoit to move the religious community to the city center of Bruges.⁴⁷⁷ According to Luc Devlieghe, the 1563 contract can be connected to a sketchy map of the Abbey in the collection of the Groeninge Museum (fig 4.4).



Fig. 4.4. Pieter Pourbus, *Sketch with ground plan Ter Duinen Abbey*, 1563. Pen and brown ink, 46 x 78,5 cm. Bruges, Musea Brugge Steinmetzkabinet, inv. GRO3101.II. Photo: © Musea Brugge.

⁴⁷⁴ Van Mander 1604, fol. 257v; Miedema p. 289. Van Mander may have seen the map when fleeing to Bruges in 1580-82. Here he must have met Pourbus since he describes his workshop as *‘the best equipped painters’* workshop he had ever seen?

⁴⁷⁵ After Pourbus’ death in 1584 it was Pieter II Claeissins who would receive several similar commissions for plotting and designing maps of Ostend (1585), Sluis (1585), the Brugse Vrije (1590), Diksmuide (1598) and Nieuwpoort (1600). See Weale 1911, pp. 40-62; Bruges 2017, p. 277.

⁴⁷⁶ Viaene 1930; Devlieghe 1960; Huvenne 1984, pp. 284-85; Bruges 2017, pp. 253-54, nr. 42.

⁴⁷⁷ Devlieghe 1960, p. 197.

Very interesting is its rendering, which combines a panoramic landscape drawing with an architectural ground plan of the abbey itself.⁴⁷⁸ While a painterly landscape with working farmers, grazing cows and the Veurne cityscape unfold, the foreground is an orthogonal ground plan of the contractual subject matter. This map served as a geometrical basis for the large-scale isometrical chorography, which he painted in 1580 (fig. 4.5). The creation of this second Ten Duinen map should be considered within the context of the relocation of the Cistercian monks in the safer surrounding of the city of Bruges, after repeated plundering of the abbey by Calvinist iconoclasts. Viaene interpreted the painted map as a conscious last depiction of the abbey during its heydays.⁴⁷⁹ Remarkably, even building materials such as bricks, tiles and a roof are included in the painting.⁴⁸⁰ In contrast to all of Pourbus' previous maps, this is an axonometric (or isometric) rendering of the abbey. The ground plan of the first map seems to have served as basis for the further development of the 'parallel axis' which constitute the walls, creating the illusion of a perspectival rendering without the application of linear perspective. Other preserved mapping projects of Pourbus are of the *hydrography of Broecke and Moerkerke-Zuid-over-Leie* (1574), the Island of *Cadzand* (1578) and of the *hydrography of Romboutswerve* (1578). All were made in the context of judicial cases involving jurisdictions of waterways and the planning of hydrological works. With this function in mind, the meticulous measurement of the terrain was a basic requirement for the representation. The map of *Romboutswerve* even articulates this fact since it bears an inscription that it was made "according to the art of chorography".⁴⁸¹

Despite the great variety in rendering, Pourbus' cartographic oeuvre shows a painter at work with great practical and theoretical understanding of geometrical plotting techniques and cartographic innovations. Four out of six maps of Pourbus are provided with scale, key and compass rose, which testify of Pourbus' knowledge of cartographic conventions, and has often been compared to more professional cartographic colleagues such as Jacob van Deventer or Gerard Mercator.⁴⁸² Although cartographic commissions are often regarded as a small side-business in a painter's career, the presentation of technical knowledge would have been more highly acclaimed by contemporary viewers.

⁴⁷⁸ All the buildings are perfectly identifiable and are indicated in a legend on the recto side. The legend is a 17th-century addition. Transcribed by Devlieghere 1960, pp. 198-204, also see Huvenne 1984, p. 183.

⁴⁷⁹ Viaene 1930, p. 66; Viaene 1951.

⁴⁸⁰ Viaene suggested that this was done in the context of a possible restoration campaign of the abbey after return of the monks in an unforeseen future. Viaene 1930.

⁴⁸¹ 'Naer de conste vande chorographie', Huvenne 1984, p. 296.

⁴⁸² Depuyt & Theelen 1998, pp. 29-34; Bruges 2017.



Fig. 4.5. Pieter Pourbus, *Painted plan of the Ter Duinen Abbey*, 1580. Oil on canvas, 214,5 x 215 cm. Bruges, Groeninge Museum, inv. GRO1534.I. Photo: © Lukasweb.

In Ghent, the Horenbout family, renowned for their production of luxurious illuminations, was involved in cartographic production.⁴⁸³ Gerard Horenbout (c. 1465 – 1540), who was working in artistic circles of Margaret of Austria and later those of Henry VIII in England, was commissioned in 1510-11 by the Ghent city council to draw a map of certain quarters of the city.⁴⁸⁴ Of Frans Horenbout (? – 1599), most likely Gerard's nephew, at least nine maps are presently known, often signed with the terms painter, geographer, engineer or mapmaker ('*caertmaker*') ranging between 1569 and 1583.⁴⁸⁵ He was closely affiliated with Pourbus' mapping projects, as he was responsible for copying the above-mentioned map of Romboutswerve (1579) and similarly made a map for Cadzand.⁴⁸⁶ His tombstone did not mention him as painter, but rather as 'geographer and engineer of His Majesty.'⁴⁸⁷ Also his sons Jacob and Lucas continued the profession of cartographers well into the seventeenth century.⁴⁸⁸ In the years 1522-23 another Ghent painter, Jan van Male, was appointed to depict the city limits on panel.⁴⁸⁹

4.2. Cartographers around Jan van Scorel

Contemporary to Blondeel's mapping projects are those of the Utrecht painter Jan van Scorel (1495-1562). Like most of the Bruges plans, Van Scorel's project is closely connected with a hydrological battle against a dangerously transgressing water line, this situated on the opposite side of the Scheldt estuary in Zeeland. Between 1549 and 1551 Van Scorel and the engineer Willem Van Noort collaborated on a project of the draining of the Zijpe area in Northern Holland by an ingenious system of embankments.⁴⁹⁰ In 1551 Van Scorel received an imperial patent for these works, which he undertook with the financial support of Nicolas Nicolai, secretary of the Order of the Golden Fleece, and the local merchant Willem Moys.⁴⁹¹ The land obtained from the dike operation would be divided up between the shareholders, which were mostly sought in Antwerp.⁴⁹² In 1561, shortly after Van Scorel's death, the patent was renewed, and Van Scorel is still mentioned as the principal initiator of the project.⁴⁹³

⁴⁸³ Denucé 1928.

⁴⁸⁴ '(...) *te maeken zeker ende extracten ende descriptive van een quartiere van dezzer stede, ende ghewesten vanden Blaermeersch, Royeghem, Borgoyen, Marijkercke, Wondereghem ende andere plaetsen*'. Decavele 1975, p. 14.

⁴⁸⁵ For the list of maps, see Denucé 1928; Denucé 1929. Gerard Horenbout's son Eloi was also commissioned with a historical map of Ghent at the times of Gwijde van Dampierre. De Busscher 1866, pp. 83-84.

⁴⁸⁶ Huvenne 1984, p. 295, 298.

⁴⁸⁷ Denucé 1928, p. 264. A similar title was given to Jacob van Deventer in 1558 and Abraham Ortelius in 1573.

⁴⁸⁸ Denucé 1929, p. 75; Büttner 2000, p. 102.

⁴⁸⁹ Decavele 1975, p. 14, 16.

⁴⁹⁰ A first initiative was made already in 1540, on this occasion the painter Cornelis Claesz. was contracted to make a map of the island Wieringen. Van Scorel probably based his map on this previous model. Van Broekhoven 2009, pp. 62-63.

⁴⁹¹ Muller 1880-81, p. 56; Faries 1970, p. 6; Utrecht 1977, p. 37. Nicolas Nicolai was Janus Secundus' brother, registry of the Golden Fleece and collector of the aid of Brabant.

⁴⁹² On the financing of the project, especially see Jehoel 2019, pp. 287-289.

⁴⁹³ Hoogewerff 1923, p. 91. There is no mention of Van Noort in the patent renewals of 1561 and 1571.



Fig. 4.6. Jan van Scorel, *Survey map for Zijpe project*, 1552. Pen and black ink with watercolour on paper, 78 x 240 cm. The Hague, National Archive, Hingman collection no. 2486. Photo: © Zijper Museum.

Two maps of the Zijpe project survive. The first is named ‘concept and description of the Zijpe, done over many years’ (fig. 4.6).⁴⁹⁴ According to Molly Faries, the document must have been produced by Van Scorel or one of his associates.⁴⁹⁵ Andeas Vlieringh, a hydrological engineer who had inspected the levee works in 1553, described Van Scorel in his *Treatise on Embankment* (1576-79) as the best possible individual to paint a map of the embankments.⁴⁹⁶ The drawing on paper depicts the area between Petten and Eierland with great attention to the location of all towns, fire towers, dunes and

of course dikes.⁴⁹⁷ The topography is rendered by combining an orthographical ground plan with perspective landscape elements around it (fig. 4.7). Anecdotal details, which include the actual levee workers render the document more a portrait of the industrious works, than an objective map. The second map is of a more legislative nature as it divides the regained Zijpe area into seven parishes spread over three large land slips (fig. 4.8).⁴⁹⁸ The area is renamed *Nova Roma*.⁴⁹⁹ The second map is much more simplified although all represented churches bare their idiosyncratic form.



Fig. 4.7. Detail of 4.6.

⁴⁹⁴ ‘*Concept van bedijckinge vande Zijpe over lange jaeren gedaen*’, The Hague, National Archive, Hingman collection n° 2486.

⁴⁹⁵ Faries 1972, p. 295, Appendix 3; Utrecht 1977, p. 66, n°15.

⁴⁹⁶ ‘*Hadde men een dijckagie mogen schilderen mette vruchte daerop wassende, Schoorle was daer den rechten man toe.*’ De Hullu & Verhoeven 1920, p. 305.

⁴⁹⁷ On the topographical accuracies of the map, see Schoorl 1990, pp. 73-74.

⁴⁹⁸ The Hague, National Archive, Hingman collection n° 2473.

⁴⁹⁹ A similar map by Van Scorel is described in Vierlingh’s treatise: ‘*Ick hebbe eenen grooten bouck gesien daer hij [Scorel] alreede seven kercken inne gepatronneert hadde die in de Zijpe gestaan zoude hebben, deen was Ront dander draijcantich*’. De Hullu & Verhoeven 1920, p. 305.

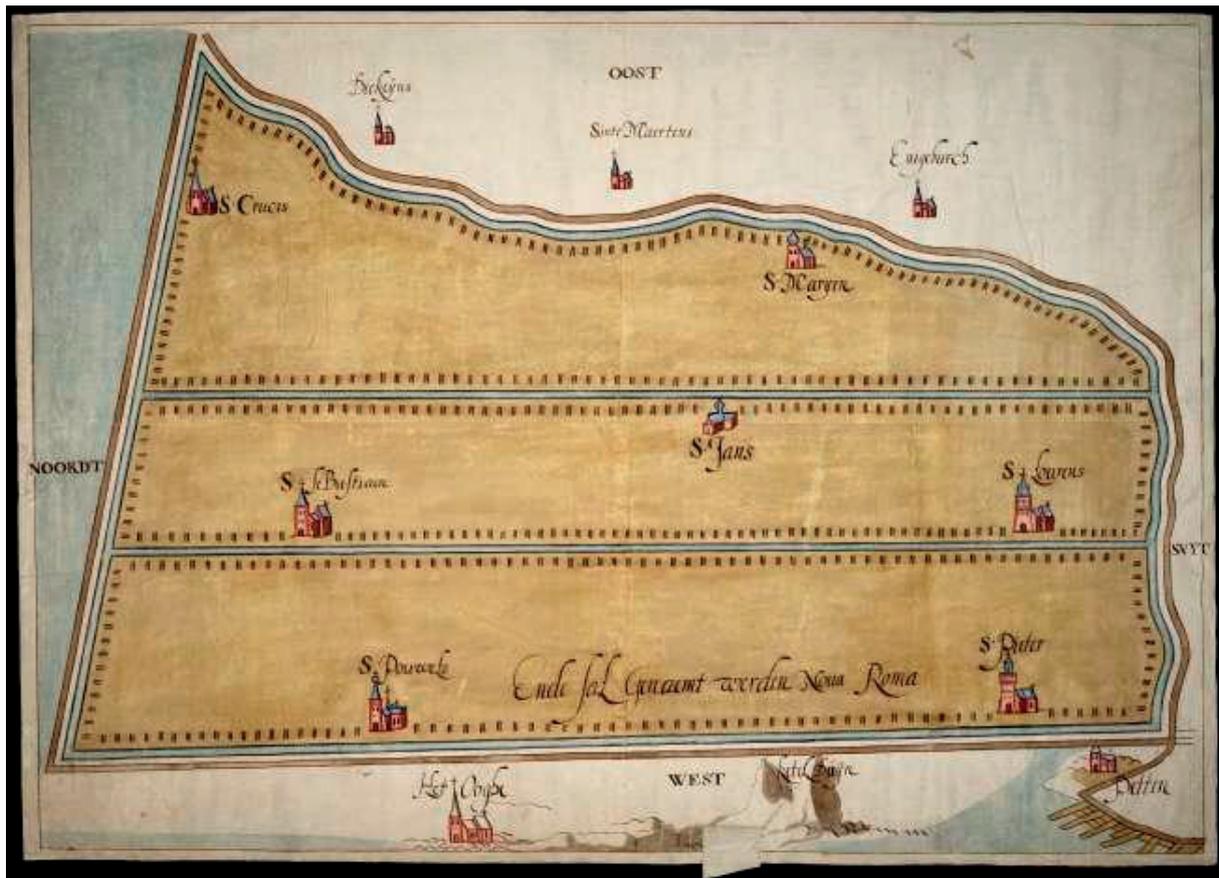


Fig. 4.8. Jan van Scorel, "Nova Roma", 1552. Pen and black ink with watercolour on paper, 58 x 81 cm. The Hague, National Archive, Hingman collection no. 2473. Photo: © Zijper Museum.

According to Van Mander, one of the shareholders of the Zijpe project was the painter Jan Cornelisz. Vermeyen (1500-1559).⁵⁰⁰ Whether he was also involved with the execution of the mapping project is unknown, but it would not have been impossible since Vermeyen was known for his geometrical and cartographic skills. Van Mander confusingly states that 'he was neither inexperienced in geometry nor surveying nor other noble sciences'.⁵⁰¹ Van Mander refers to the project for which Vermeyen was most known for; namely the documenting of the *Battle of Tunis* (1535) and the famous related tapestry cycle woven by Willem de Pannemaker, for which Vermeyen provided the cartoons between 1548 and 1554 (fig. 4.9).⁵⁰² Vermeyen was a member of the imperial retinue of Charles V, to record the campaign.⁵⁰³ The cycle opens with a detailed map of the Mediterranean region, framed by two Corinthian columns. The map itself can be compared to contemporary portolan maps, as it

⁵⁰⁰ Van Mander, fol. 225r. Miedema p. 158. On Vermeyen's relationship to the Van Scorel workshop, see Bruyn 1984; Horn 1989, pp. 5-7.

⁵⁰¹ 'in dit en ander deelen der Const een seer verstandighe en aerdighe handelinge in Geometrie oft Landmaet en meer edel wetenschappen niet onervaren wesende'. Van Mander 1604, fol. 224v. Miedema, pp. 136-37.

⁵⁰² Bunes Ibarra 2006, pp. 95-135.

⁵⁰³ Horn; 1989; Buchanan 2014; New York 2014, p. 320.

includes rhumb lines, wind roses and compasses.⁵⁰⁴ Vermeyen combines the portolan map with a bird's-eye perspective from an elevated vantage point in the upper regions in order to represent the ports, and cities of Tunisia. The bearded artist proudly poses next to the map, holding a compass in his right hand, while pointing to the scales for land and sea miles indicated on the map.⁵⁰⁵ Vermeyen consciously represents himself, not as a painter but as a cosmographer, and even takes the effort of explaining this position in the accompanying text in the cartouche which his woven alter ego is holding: 'As an artist I have been more concerned about the precise positioning, than the requirements of painting. Everything depicted, both sea and land, is fully in accordance to the laws and rules of cosmography. (...) It is thanks to this precision that the characteristics and events in the other tapestries can be better understood.'⁵⁰⁶ Measurability and geometrical accurateness are considered to be a priority and Vermeyen recommends himself firstly as a cosmographer and only secondly as a painter.



Fig. 4.9. Willem de Pannemaker/Jan Cornelisz. Vermeyen, *Map of the Mediterranean from the Conquest of Tunis*, 1546-48, Madrid, Patrimonio Nacional de España, inv. 10005895. Photo: © Patrimonio Nacional

⁵⁰⁴ Horn 1989, I, p. 261. Horn associates Vermeyen's map with Lucas Cranach the Elder's printed map of the Holy Land (1508) and Albrecht Altdorfer's *Alexanderslacht* (1529). Although Vermeyen might have been aware of their existence, his geometrical knowledge did not make him dependent upon these references or examples.

⁵⁰⁵ Horn 1989, pp. 182 and 262; Vienna 2013, pp. 66-71.

⁵⁰⁶ 'Y assi como sto se ha he cho en lo de la mar conforme a la cosmografia assi en lo dela tierra el pintor ha observado lo que a su arte se deve. (...) se pueden despues major entender las particularidades de los otros tapizes y el sitio de aquellas partes do passo lo que en ellos contiene'.

Within the same network of Van Scorel and Vermeyen, the name of Jan Gossart should also be mentioned. Although no cartographic endeavors by him are known, his brother Nicasius, delivered plans for the construction of a new harbor in Middelburg.⁵⁰⁷ Similarly, in 1522 Cornelis Engelbrechtz. and his son Pieter were paid by the city authorities of Leiden for the making of a map of the waters of Mariënpoel, which was to be used by the city as a legal document concerning fishing rights.⁵⁰⁸

Another, northern Netherlandish case of a cartographic painter closely related to the circle of Van Scorel and Gossart is that of Willem Henndricxz Croock (1469-1541/51).⁵⁰⁹ In 1529 he drew a map depicting the hydrological situation of the Dutch 'Noorderkwartier' and one year later of the surroundings of Amsterdam.⁵¹⁰ On November 28th 1522, Gerard Geldenhauer describes him in a letter to his friend Frans van Craneveldt as "*a good painter and cosmographer who had painted a map in ink from Lobith to the coast*".⁵¹¹ Croock was not only a painter, he also held the position of municipal building master of Amsterdam (*'fabrieksmeester'*) between 1532 and 1538.⁵¹² At the beginning of the sixteenth century this function was more or less still an administrative one with the purchase of building materials and the overseeing of building processes as the main responsibility.⁵¹³ In this function he traveled with the burgomasters of Amsterdam to inspect and chart the dikes surrounding the city. In 1534 he was paid for inspecting and charting the dikes near Diemerdam, east of Amsterdam.⁵¹⁴ Attributed to Croock's cartographic oeuvre are two maps of North Holland (*Hollands Noorderkwartier*) both dated 1529/30 and a map of South Holland from Rotterdam to Amsterdam.⁵¹⁵ The fact that Croock's maps bear a striking overall visual resemblance to Van Scorel's cartography in its use of specific colours, the combined perspectives and identical figurative details, is an indication that both painter-cartographers were working in a close relationship to each other's work. They were also connected through the mutual familiarity to Van Oostanen. When Petrus van Opmeer's describes Dürer in his *'Opus Chronographicum Orbis Universi'* (1611) he compares him with renowned Netherlandish contemporaries being, "Lucas van Leyden, Willem Croock and Jacob Cornelisz. of

⁵⁰⁷ Gossart 1903, p. 57; Smeyers 1968, pp. 87-88; Kavalier 2010, p. 38; Alsteens 2010, p. 99.

⁵⁰⁸ Bangs 1979, p. 5 n. 55; Filedt Kok 2014, p. 16. Although the original map no longer exists, a 1586 copy made by Sijmon Franz van Marwen, of the map is preserved.

⁵⁰⁹ Duverger 1961; Huussen Jr. 1972; Van Eeghen 1986, p. 115. Willem's father, Hendrik Croock was a printer and engraver who worked in Bruges, active around 1480-90. On Hendrik Croock, see Pinchart 1860-82, vol. II, pp. 75-77.

⁵¹⁰ Duverger 1961, p. 77.

⁵¹¹ *'Bathavorum insulam Guilielmus Crocus egregius pictor et cosmographus mihi depinxit ab arce Lobeta in Oceanum mare (...) hanc brevi videbis et gaudebis'*. De Vocht 1928; Enenkel & Ottenheim 2017, pp. 140-57.

⁵¹² Huussen Jr., p. 34; As municipal building master Croock received an annual allowance of 10 pound. Van Essen 2011, p. 142, appendix 4.

⁵¹³ Van Essen 2011, p. 143.

⁵¹⁴ Huussen Jr., pp. 35-36.

⁵¹⁵ Brussels, ARB, Grote Raad n° 610; The Hague, National Archive, Hingman Collection, n° 2460; GAA, Topografische Atlas G 110-6.

Amsterdam, Gerard David of Haarlem, and Jan Gossart of Mabuse".⁵¹⁶ According to Van Opmeer, Croock and Jacob Cornelisz. Van Oostsanen were the most renowned artists of Amsterdam.⁵¹⁷ They must have known each other quite well, since they had collaborated at least once. In 1520 Willem Croock and Jacob Cornelisz. Van Oostsanen both received a payment of 106 pounds to provide banners for six warships that had to be sent off to Christian II of Denmark.⁵¹⁸ Van Oostsanen was of course also Van Scorel's first teachers.

4.3. Cornelis Anthonisz. as a cartographic designer

As we have seen in the analysis of the Amsterdam sketchbook (see chapter 3), the Van Oostsanen workshop was well trained in architectural design, but also in cartography. Only recently it was suggested by Daantje Meuwissen that the author of the sketchbook might have been his grandson, Cornelis Anthonisz (c. 1507-1553).⁵¹⁹ Not only are many of the figures traceable in Cornelis Anthonisz's painted and printed oeuvre, several perspectival views of buildings in the Amsterdam sketchbook have convincingly been associated with Anthonisz's most ambitious and best-known cartographic endeavor. In 1538 Anthonisz was paid 6 pounds for designing and painting his *Bird's-eye view of Amsterdam*, commissioned by the city government and to be sent to Charles V as a gift from the city as a sign of the authorities' loyalty to the imperial majesty (fig. 4.10).⁵²⁰ The map, however, never reached the Emperor and was displayed in the town hall. By 1544, the map had reached a certain level of local fame and in order to prosper and encourage the city's growing civic pride, the bird's-eye view was distributed to a wider audience as a series of woodcuts. The edition in twelve woodblocks was an impressive technical feat and can be considered as one of the more luxurious print series available on the northern market at the time.⁵²¹ As one of the earliest bird's-eye views in the Low Counties⁵²² it has often been linked with Jacopo de' Barbari's woodcut of Venice (1500).⁵²³ On more than one level, the

⁵¹⁶ 'Fuit certe decori Nurembergo, sicuti Leydae et Amstelredamo Guilielmus Crocus et Jacobus Cornelius, Harlema Theodoricus Daaventiensis et Hannoniae Joannes Mabuisis.' Van Opmeer 1611, I, p. 448.

⁵¹⁷ Duverger suggests that the main reason for including Croock in this list was the fact that one of van Opmeer's tutors was the humanist priest Cornelius Crocus (1500-50), who may have been related to Willem Croock. Duverger 1961, p. 79.

⁵¹⁸ 'A Jehan Bennick conseiller et Crispin Janssone van Boschysen, receveur de l'espargne et Hollande et commis de par l'empereur à louer et faire aquiper et accoustrer 6 hulkes de guerre envoyés au service du roy de Dennemarckee. Item à Jacques Cornelisz et Guillaume Croeck, peintres, pour la facion et peinture destictes bannières, 106 lb.' ADN Lille B. 2294, fol. 397. Duverger 1961, p. 79.

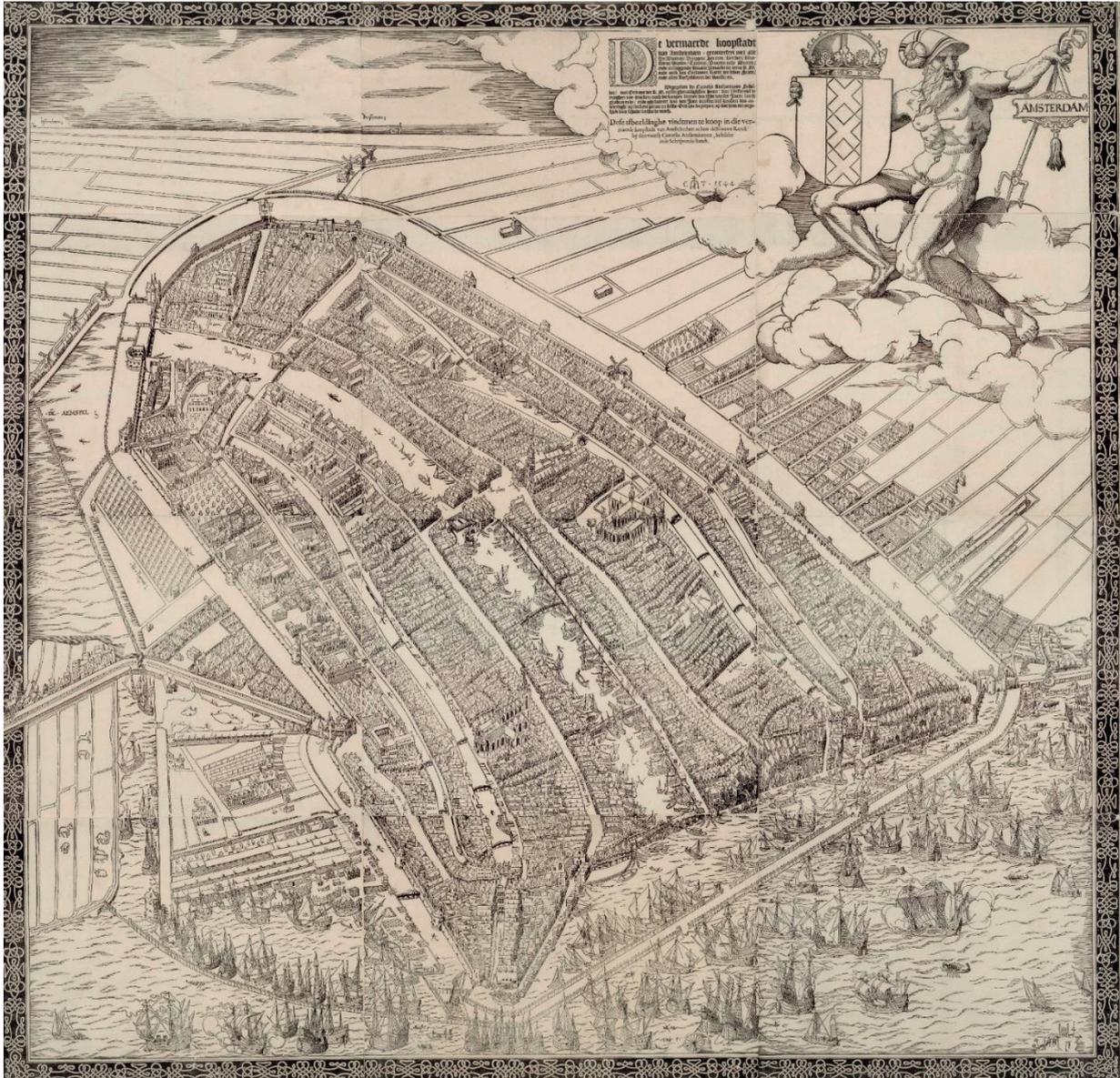
⁵¹⁹ Meuwissen 2014, p. 30; Meuwissen 2017.

⁵²⁰ Dubiez 1969, pp. 27-36; Armstrong 1990, pp. 12-13; Colijn 2008; Knevel 2013.

⁵²¹ The present rarity of large-scale prints provides little information on the produced quantity of prints. On the low survival rate of prints see Boorsch 2008, p.36.

⁵²² An anonymous bird's-eye view of Antwerp, dated ca. 1520, slightly predates that of Cornelis Anthonisz. Rijksmuseum, Rijksprentenkabinet, RP-P-OB-4318. Also predating the Amsterdam map is the anonymous bird's-eye view of Ghent dated 1534. Decavele 1975. On the development of Netherlandish city representations, see De Rock 2017.

⁵²³ Dubiez 1969, p. 29; Schultz 1978, p. 472; Nutti 1994, p. 16; Amsterdam 2014, p. 47.



bird's-eye view of Amsterdam can indeed be regarded as a northern response to de' Barbari's view of the Laguna.

Firstly, the allegorical elements crowning the map, are

unambiguous indicators of the cities' wealth obtained through mercantile effort. While the Venice map is adorned with Mercury, looking down at Neptune as a symbol of Venice's dependence on the sea, the entire right-hand corner of Anthonisz' map is crowned with an eye-catching figure of Neptune holding the name and seal of Amsterdam in both his hands. But the most important similarity is of course the way in which its rendering was established. In his analysis of de' Barbari's map, Juergen Schultz convincingly argues that de' Barbari's map must have been a composite of images taken from

Fig. 4.10. Cornelis Anthonisz, *Bird's-eye view of Amsterdam*, 100,4 x 109,3 cm, woodcut, 1544. Amsterdam, Rijksmuseum, Rijksprentenkabinet, RP-P-OB-70.399.

various elevated viewpoints pasted together.⁵²⁴ With Venice's wide range of campanili this must have been a feasible task. Trigonometrical calculations and the measuring of distances between known monuments – together with conventional linear perspective - would have enabled the artist to plot the three-dimensional city on a two-dimensional plain. The same scientific and systematic approach seems to have been used by Cornelis Anthonisz. for his Amsterdam map. When triangulating the city, Anthonisz. must have used several church towers and wall towers to determine angles and distances. Various distortions in the perspective suggest that the map is a montage of multiple studies, and combines perspectival rendering with axonometry (such as in Pourbus' Ten Duinen map).⁵²⁵ The drawings in the Amsterdam sketchbook - such as a view of the northwest side of the city (fol. 48r) - provide firm visual support for the hypothesis, first proposed by Maikel Niël, that the Amsterdam map was constructed with the aids of compass measurements from several elevated view points in the city, such as church towers, ship's masts and the city's fortifications.⁵²⁶ The bird's-eye view of Amsterdam by Anthonisz. had set off a long tradition, making bird's-eye views almost into a Netherlandish cartographical specialty, which also included the map of bird's-eye view Bruges (1562), etched on 10 plates, by that other painter-cartographer Marcus Gheeraerts (c. 1520-1590), and which would culminate in the *Civitates Orbis Terrarum* (publ. between 1572-1617) by Georg Braun (1541-1622) and Frans Hogenberg (1535-1590).⁵²⁷

⁵²⁴ Schultz 1987, p. 431-46; Howard 1997, pp. 103-6. Bratti suggested an alternative working method, that Barbari would have used an orthographic ground-plan, which he then manipulated to achieve the bird's-eye perspective. Bratti 1927, pp. 43-54.

⁵²⁵ Niël 2000.

⁵²⁶ Niël 2000, pp. 107-13, Amsterdam 2014, p. 156; For a detailed analysis of the relationship between the sketchbook and the map, see Meuwissen 2017, pp. 37-42. Similarly, in July 1561, Pieter Pourbus was paid for making drawings of Bruges from the elevated viewpoint of the Belfry tower. Huvenne 1984, p. 309.

⁵²⁷ For Marcus Gheeraerts' map of Bruges, see Hodnett 1971, pp. 25-26.

In 1541 Anthonisz made a map for the city authorities of Amsterdam which was described as “a map of the North Sea reaching into the Zuider Zee”.⁵²⁸ The same year, another payment was made to “Cornelis Thonisz. Schilder” for painting a map of the North and Zuider zee with depths and sandbars.⁵²⁹ Neither map has survived. In 1543 he published a *Caerte van Oostlant*, depicting the Northern Netherlands, with Denmark, Sweden, and the Baltic region (fig. 4.11).⁵³⁰ Unfortunately no copy has been preserved of the Amsterdam first edition. The printed woodcut in nine sheets knew quite some popularity as a third state was issued by the Antwerp publisher Arnold Nicolai in 1560.⁵³¹ The map represented an enormous progress in the development of maritime cartography, distancing itself from the often generic contemporary portolan maps.⁵³² It contains all the modern cartographic conventions (portolan lines, scales, northern orientation, orthographic projection and even strapwork cartouches) and should be regarded as a last maturation stage of geometrical plotting a few years



Fig. 4.11. Cornelis Anthonisz, *De Caerte van Oostlant*, hand-coloured engraving, 1543. Amsterdam, Rijksmuseum, Rijksprentenkabinet.

⁵²⁸ De Graaf 1870, p. 511; Karrow 1993, p. 43; Colijn 2008, pp. 194-95.

⁵²⁹ For an overview of Anthonisz. Mas see Dubiez 1969, pp. 95-98; Karrow 1993, pp. 41-49.

⁵³⁰ Dubiez 1969, pp. 16-21; Lang 1986.

⁵³¹ Koeman *et. al.* 2007, p. 1304. Other copies were published by Tramezini in Rome (1558) and Camocio in Venice (1562). Schilder 1985, p. 98.

⁵³² Schilder 1985, pp. 98-99.

before professional cartographers entered the stage of mapmaking. Its scientific approach and meticulousness were recognized by Ortelius, who refers to Anthonisz' *Caerte van Oostland* in his celebrated *Theatrum Orbis Terrarum*.⁵³³ In the note to the reader on his *Caerte van Oostlant*, Anthonisz. had promised to publish a book in which he would explain more extensively everything he could not include in the little cartouche, adding that the book would include 'things pleasurable and useful to mariners'.⁵³⁴ This would become his *Onderwijsinge vander zee* (1554), one of the earliest Dutch nautical manuals which included several woodcuts signed by Anthonisz.⁵³⁵ Although trained as a painter in Van Oostsanen's workshop, and prolific publisher of principally moralizing prints⁵³⁶, Anthonisz.' cartographic endeavors seem to have overshadowed his career as a painter.⁵³⁷

4.4. Collaboration and the dissemination of triangulation methods

Having established the important role of local painters in the development of the cartographic tradition in the Low Countries, the main question which concerns us here is the issue of collaboration with other land surveyors and how much these artists were able to rely on their geometrical knowledge of triangulation in order not only to paint the map, but also make the calculations and measurements required for plotting these maps.

Although a painter's geometrical knowledge or family background may have qualified them to obtain a certain cartographic commission, quite often they were assisted by one or more of the official city land surveyors. In 1540 Jan Meys was appointed as land surveyor of the Emperor in Brabant and was ordered to create a map depicting the Sonian Forest near Brussels; a task in which he was assisted by the painter Frans Borremans.⁵³⁸ Blondeel's 1546 *Concept ende Ordonantie* was made as a collaboration between the painter and the hydrological engineers Jan van der Meersch and a certain Nicolas of Brussels.⁵³⁹ Van der Meersch was the city official of Bruges and described in one document

⁵³³ Keuning 1950a, p. 51; Meurer 1991, p. 36.

⁵³⁴ Keuning 1950a, p. 53; Keuning 1950b, p. 689.

⁵³⁵ The *Onderwijsinge* was published by Jan Ewoutsz., who was also responsible for most of Anthonisz. Moralizing prints. Dubiez 1969, pp. 22-26; Armstrong 1990, p. 17; Karrow Jr. 1993, p. 47.

⁵³⁶ On Anthonisz.'s Prints, especially see Armstrong 1990.

⁵³⁷ For a cohesive picture of Anthonisz' cartographic endeavours, two additional prints should be mentioned: his Battle of Algiers (1541) and a depiction of the Siege of Th rouanne (1553). Since these prints functioned as newsprints to report about the Habsburg military campaigns, rather than being strictly cartographic projects these are not included in this study. On these prints, see Armstrong 1990, pp. 67-75; Martens & Peeters 2007, pp. 72-79; Martens 2009, pp. 360-63.

⁵³⁸ 'Meesteren Janne Meys,gezworenen lantmetere ons heeren des keyzers in Brabant, denwelcken dese rentmeester by appoin-ctemente van deser cameren van den rekenningen vuytgereyct ende betaelt heeft, de somme vanderthien ponden artois, dairop dat beloopen zyne vacantien gedaen met Franchois Buremans schil-dere, opt bosch van Zonien.' B ttner 2000, p. 101.

⁵³⁹ Weale 1908b, p. 165; Jansen 1998.

as ‘director of the hydraulic works’.⁵⁴⁰ When Blondeel’s successor, Joos van der Beke was asked to paint two maps of the same region, the painter was paid to inspect the area and “measure the course of the river and the dept of the sea” together with the municipal register of the Vrije and a land surveyor (*lantmetre*) called Hendrik van Beernem.⁵⁴¹ The extent of collaboration with official land surveyors becomes clear by studying the large amount of documentary which remains of Pieter Pourbus’ life-long employment as cartographer both for the city of Bruges and the Brugse Vrije. On many occasions Pourbus was assisted by city officials and land surveyors. In May 1549, for example, he was paid for surveying the possibilities for the design of a new canal, together with land surveyor Charles van Bonem.⁵⁴² Similarly in 1577, in preparation for his map of *Romboutswerve*, Pourbus was escorted by land surveyor Ingel Stoet, together with three other city magistrates.⁵⁴³

However, it would be premature to consider these collaborations as indicative of a lack of expertise and geometrical know-how on the part of the involved painters. In early modern Netherlandish architectural design, it was common practice to request a second opinion in the form of an external architect’s expertise. In no way was this a sign that the contracted architect who had made the initial design or supervised the building site was deemed unfit or inexperienced.⁵⁴⁴ On the contrary, it seems that many of the painters who were contracted to design, and plot maps had received the commission precisely because of their understanding of geometrical design principles. On several occasions, Pourbus himself is contracted in the function of land surveyor, such as in 1583, when he was part of a commission that was to advise on the hydrology of the Ieperleet. Later that same year, he was paid to examine and advise on the reinforcement of the dikes of Sluis.⁵⁴⁵ Van Mander called him “a good cosmographer and land surveyor” and the Bruges poet Zeger van Male described him as “an expert painter and engineer in the arts of arithmetic”.⁵⁴⁶ Such appraisal of a painter’s geometrical skill in relation to his cartographic accomplishments, was not that uncommon and even reminds us of the accolades bestowed upon Van Eyck as seen at the beginning of this chapter. About Jan Cornelisz. Vermeyen, Van Mander stated that he had “a very sound and nice grasp of geometry and land surveying and was not inexperienced in other noble sciences”.⁵⁴⁷ The claim of being experienced in science and arts – in the context of the *Quardivium* of the Liberal Arts – seems to have been one of the

⁵⁴⁰ De Smet 1974, p. 66; Dewilde, Dumolyn, et al. 2018, p. 10.

⁵⁴¹ *Wouter de Meulinck is int quartier van Gaternesse ende van den lande van Walcen in Zeelant, met eenen landtmeter ende schildere, omme te visiteren den loop ende diepte vande zee (...)*. Mertens 1982, pp. 231-32

⁵⁴² Huvenne 1984, p. 307.

⁵⁴³ Huvenne 1984, pp. 298, 312.

⁵⁴⁴ An expert cartographer such as Jacob van Deventer was also often assisted and informed by local land-surveyors during his cartographic campaigns between the 1540s and the early 1570s. Rutte & Vannieuwenhuyze 2018, p. 31

⁵⁴⁵ Huvenne 1984, p. 311.

⁵⁴⁶ Huvenne 1980, p. 68.

⁵⁴⁷ *in dit en ander deelen der Const een seer verstandighe en aerdighe handelinghe in Geometrie oft Landmaet en meer edel wetenschappen niet onervaren wesende.* Van Mander 1604, fol. 235r.

main selling points of the painters who obtained cartographic commissions. Likewise, Cornelis Anthonisz. included his address on his 1544 woodcut of his Amsterdam map, together with the indication that the woodcuts were intended for “all lovers of art”.⁵⁴⁸ This reminds us of the very same trope, used so often in introductions to architectural treatises of Roriczer, Schmuttermayer, Dürer and Pieter Coecke van Aelst, which did not merely refer to art in an aesthetic sense, but rather to an understanding of the Artes (and geometry in particular) in order to achieve the work of *art*. With this dedication Anthonisz. also referred to the geometrical and mathematical complexities of triangulation, which had been essential for plotting the city on a plane surface.

Like Anthonisz., Jan van Scorel – having also been taught in the Van Oostanen workshop with its focus on geometrical knowledge - took great pride in his geometrical skills and abilities as a means to consider himself an artist in the sense of a master in the liberal arts. In one of his early works made during his voyage to Italy, the *Triptych of the Holy Kinship* in Obervellach, painted in 1519 for cardinal Matthäus Lang von Wellenburg, he signed it “*Joannes Scorel hollandius pictorie artis amator pingebat*”, perhaps influenced by novel Italian humanist concepts, Van Scorel presents himself as a lover of the Arts, again in the sense of liberal arts.⁵⁴⁹ Van Scorel’s concept of a lover of the liberal arts, might also be connected to a stay in the workshop of Albrecht Dürer in 1519, as was claimed by Van Mander.⁵⁵⁰ Another interesting passage told by Van Mander of Van Scorel’s travels through Germany, is a meeting in Spiers “where he found a clerical man who as very artistic (*constigh*) in architecture (*metseleijde*) and perspective (*vercortingen*), by whom he [Van Scorel] stayed for some time to learn this art”.⁵⁵¹ The fact that the term *constigh* is used in relation to the design of architecture and geometrical perspective cannot be underestimated and reveals again how architecture and perspective (and in the line of the same argument also land-surveying and cartography) were considered as the fruits of geometry.

Every so often the geometrical expertise of painters would come into conflict with the appointed land surveyor, such as was the case with Jan Van Scorel in June 1549. Two years before their collaboration on the above-mentioned mapping project of Zijpe the Utrecht painter collaborated with the engineer Willem van Noort (who was also one of the main protagonists in the 1542 court case) to design a ship which would enable dredging the Vecht and Rhine river in order to secure maritime commerce to Utrecht.⁵⁵² The project would never come to fruition and resulted in some

⁵⁴⁸ ‘*Aen allen Liefhabern der Consten*’.

⁵⁴⁹ Friedländer 1967-76, VI, no. 289; Meyere 1981, pp. 7-10; Faries 1987, pp. 92-93; Suykerbuyk 2013, p. 34; Jehoel 2019, pp. 87-88, 103-113.

⁵⁵⁰ Van Mander 1604, fol. 235r. On Van Scorel’s stay in Dürer’s workshop, also see Dacos 2012, p. 34; Jehoel 2019, pp. 94-105.

⁵⁵¹ ‘*Hy vondt een gheestelyk Man, seer constigh in Metseleijde en vercortingen, by welcken hy hem begaf eenen tijt langh, dese Consten af te leeren, waer voor hy desen maecte eenighe stucken schilderije*’. Van Mander 1604, fol. 235r.

⁵⁵² Muller Fz.1881-82, p. 246; Utrecht 1977, p. 65, n°12 & 13.

considerable conflicts between the painter and the engineer. In a court case in which Van Scorel was accused of delaying the construction of the dredging ship, the painter defends himself by stating that Van Noort never shared information of the construction agreements and insisted on working with his own carpenters with whom Van Scorel was unfamiliar. When confronted with Van Scorel's concerns, Van Noort always seems to have answered "that he would take care of things", without then making any further progress. Furthermore, Van Scorel complained that his technical advice was never taken into consideration.⁵⁵³ Especially this last element seems to point towards a conflict about who had the most technical expertise. Eventually Van Scorel invited the carpenter Jan Van Oey to inspect the dredging ship, asking for his expertise as a third party.⁵⁵⁴

4.5. Networks

An important aspect in the dissemination of the technical knowledge required for mapmaking seems to have been a close network of learned painters, as many of the above-described case studies are interconnected and related to each other. There is of course the obvious connection between Blondeel and his son-in-law Pourbus.⁵⁵⁵ Perhaps even more important than the transfer of the required technical knowledge, were the right contacts among the city magistrates for new contracts. An interesting example is the connection between the Bruges project and the Zijpe project. As related by Marcus Van Vaerenwijck, both Lanceloot Blondeel and Jan van Scorel were contracted in 1550 to repair Jan van Eyck's Ghent Altarpiece.⁵⁵⁶ It is tempting to find meaning in this contact between these two painter-cartographers, four years after Blondeel had finished his hydrographical map of Bruges and one year before Van Scorel's involvement in the embankment project of Zijpe. The use of similar colour schemes and rendering methods seems to point to some influence.⁵⁵⁷ Technical and geometrical know-how may also have been transmitted through workshop apprenticeship. Van Mander mentions that Van Scorel had spent some time in the workshop of Jacob Cornelisz. Van Oostanen.⁵⁵⁸ This would have been between 1515 and 1518. Although the earliest drawings in the Amsterdam sketchbook stem from 1523, it does indicate the importance of geometrical knowledge in the daily practice of the Van

⁵⁵³ 'Opten VIIe articule antvoirt Schorel voirsz: Dat hij noyt tbesteek en heeft ghesien en heeft noch die timmerlyuden oick nyet en kenden op die tyt, mair altyt als Schorel den voirscreven Willem vraechden, hoe ist mittet scip, gaff Willem altyt voir antvoirt, laet my dair voir zorgen, ende en heeft int maicken van tscip noyt zyn raets begheert', Muller Fz. 1881-82, p. 248.

⁵⁵⁴ 'mair is waerd dat Schorel mit Jan van Oey ghegaen is ten huize van den timmerman om hem te toonen die fouten impiedierende den ganck vanden bancken'. Muller Fz. 1881-82, p. 250. Muller suggests that Jan van Oey might be related to Sebastian van Noyen, but there is no evidence to support this assumption. Jan van Oey delivered in 1543 the rood screen in the St Mary church of Utrecht, after the design drawings on three sheets by van Scorel. Van Hasselt 1883, p. 331; Hoogewerff 1915, p. 313.

⁵⁵⁵ It was also suggested that Pourbus's knowledge of triangulation may have been influenced by a supposed meeting with Jacob van Deventer in Ostend in 1562. De Smet 1947, p. 46; Rutte & Vannieuwenhuyze 2018, p. 41.

⁵⁵⁶ Friedländer 1967-76, VI, p. 30.

⁵⁵⁷ It was suggested by Huvenne that Pieter Pourbus may also have been a pupil of Van Scorel, given some stylistic similarities in the early work of Pourbus. Huvenne 1984, p. 112.

⁵⁵⁸ Van Mander 1604, fol. 225r. Miedema, p. 158.

Oostsanen workshop.⁵⁵⁹ Since Willem Croock was also connected to the productive Van Oostsanen workshop at around the same time when Van Scorel was a student, he might have had a considerable influence on Van Scorel's later cartographic projects, which is particularly apparent in the similarities in rendering and certain cartographic conventions when comparing both artist's maps.

After leaving the Van Oostsanen workshop, Van Mander notes that Van Scorel was an apprentice of Jan Gossart. As mentioned earlier, Gossart also enjoyed close family ties to professions which required architectural and geometrical design skills. His brother Nicasius was active as a goldsmith, mason and cartographer. His wife, Margriet Smolders came from a family of woodcarvers.⁵⁶⁰ Given the hereditary nature of crafts within family structures and the custom to wed within the same guild it is possible that Gossart too might have had some other family members with a background as a goldsmith, woodcarver, masons or sculptors.⁵⁶¹ Since Van Scorel briefly worked in Gossart's workshop, this might in fact be a second contact with architectural design techniques and, more importantly, its geometrical basics.

As a major centre of learning, the university of Leuven not only played a crucial role in the development of early cartography, but it also provided a significant link between many of the above discussed mapmaking Netherlandish artists. During the first decades of the sixteenth century, the university stood out as a centre of mathematics, instrument making and cartography.⁵⁶² The figure of Gemma Frisius (1508-1555) would prove to be of crucial importance in the development of triangulation and objectively scientific representation methods in cartography, which had a direct influence on Gerard Mercator – also a Leuven alumnus.⁵⁶³ With his *Libellus de locorum describendorum ratione* (1533), Frisius published the first short treatise on triangulation as a supplement to his edition of the German scholar Peter Apian's *Cosmographicus Liber*. The first edition appeared in Antwerp with printer Johannes Grapheus (1502-69) brother to Cornelis Grapheus, while its second 1540 edition was published by Gillis Coppens van Diest.⁵⁶⁴ Frisius developed a scientific method of land surveying by determining the difference in geographical longitude by means of traveling with chronometers. In his scientific work Frisius often collaborated with the goldsmith and engraver Gaspar van der Heyden (1496-1549), who assisted him with the construction of astrological instruments and celestial globes.⁵⁶⁵ Also working in Frisius' Leuven milieu was Jacob van Deventer, who started applying triangulation

⁵⁵⁹ On the dating of the sketchbook, see Van Tuinen 2014, vol. 2, p. 18.

⁵⁶⁰ Duverger 1968, pp. 1-3; Ainsworth 2010, p.14.

⁵⁶¹ This was already suggested by Friedländer 1967-1976, vol. 14, p. 111. Contested by Alsteens 2010a, p. 96.

⁵⁶² De Smet 1967a; De Smet 1967b; Koeman et. al. 2007, pp. 1296 -98.

⁵⁶³ On Gemma Frisius, see Hallyn 2008.

⁵⁶⁴ Pinchart 1860-82, vol. 2, pp. 135-7. Both publishers would later be involved with the printing activities of Pieter Coecke van Aelst.

⁵⁶⁵ De Smet 1964; Koeman et. al. 2007, pp. 1296-7.

methods at around the same time.⁵⁶⁶ Interestingly for our discussion of artist-mapmakers, many of these artists were connected to the Leuven cartographical network. The commission of Cornelis Anthonisz.' *bird's-eye view of Amsterdam* of 1536 followed shortly after the publication of Frisius' booklet on triangulation.⁵⁶⁷ Willem Croock forms a crucial link between the Amsterdam Van Oostanen – Anthonisz. workshop and Leuven, since Croock had studied in Leuven and was acquainted with Van Oostanen, with whom he had painted banners for warships in 1520, as mentioned earlier.⁵⁶⁸ Van Eeghen suggests that Cornelis Anthonisz. was trained in cartography by his grandfather's associate.⁵⁶⁹ Both Anthonisz's and Willem Croock's projections show many similarities to those of Jacob van Deventer as they make correct use of the application of triangulating distances between cities, as described in the theoretical writings of Frisius.⁵⁷⁰ Anthonisz. himself may have spent some time in Leuven as well, as was already suggested by Meuwissen.⁵⁷¹ A drawing in the Amsterdam sketchbook also points towards this direction. The drawing on fol. 30v represents a sketch of an architectural ornament in the Antique style (fig. 3.7).⁵⁷² The chimneypiece is somewhat comparable in composition to the *Last Supper* from the workshop of Albrecht Bouts' (1452–1549), painted around 1525-1530, a stylistic update of Dirk Bouts' famous Leuven painting.⁵⁷³ The chimneypiece in the background of the painting equally combines an antique medallion, placed upon a classical architrave decorated with foliage ornament. Not unlike Bouts, the roundel in the sketchbook is framed by two putti who are holding garlands – by the 1520s a stock motive of Antique ornament which had once been introduced into the antique ornamental vocabulary by Hans Memling in the late 1470's. Given the similarities in composition between the painted and drafted ornament, it is not unthinkable that Anthonisz. had studied the painting in Leuven.⁵⁷⁴ This also aligns with the recent dating of the Amsterdam sketchbook to the late 1520s. If so, some of the geometrical exercises such as the visual pyramids on fols. 17v. and 27v. might also be considered in the context of studies in triangulation occurring in Frisius' intellectual

⁵⁶⁶ It has been suggested that Jacob van Deventer had applied triangulation methods before Gemma Frisius published it, De Smet 1967b, pp. 334-36. This opinion is nuanced in Rutte & Vannieuwenhuyze 2018, p. 32.

⁵⁶⁷ Contemporary to Anthonisz. *Bird's-eye view of Amsterdam* was a bird's-eye view on Leuven, made by an anonymous woodcutter with the monogram AP and published in Antwerp by Willem Lieftrinck around 1540. This puts both Leuven and Amsterdam at the origins of the development of the increasingly popular genre of the bird's-eye city renderings in the Low Countries. Luyckx 2013; Leuven 2016, pp. 78-85, no. 2.

⁵⁶⁸ Huussen Jr. 1972, pp. 29-53; Meuwissen 2017, p. 43.

⁵⁶⁹ Van Eeghen 1986, p. 115.

⁵⁷⁰ On the triangulation of Croock, see Huussen Jr. 1972, pp. 42-43. On Van Deventer's projection methods, see Rutte & Vannieuwenhuyze 2018, pp. 31-35.

⁵⁷¹ Meuwissen 2017, p. 22.

⁵⁷² Van Tuinen 2014, vol. 2, p.116.

⁵⁷³ Brussels, Royal Museum of Fine Arts of Belgium, inv. 2589; Henderiks 2011, pp. 179-181, no. 32.

⁵⁷⁴ Van Tuinen suggested that the draftsman of the sketchbook based the chimneypiece drawing on the one in the Vierschaar, the courtroom in the old Town Hall of Amsterdam, which was destroyed in 1652. Neither iconographic nor archival descriptions of the old Amsterdam Tow Hall, provide any evidence for the existence of such mantelpiece, see Van Tuinen 2014, vol. 2, p. 111; Van Tuinen 2017, p. 58.

environment.⁵⁷⁵ More suggestive is an indirect connection between Jan van Scorel and Gemma Frisius himself, which may shed some light on his abilities of triangulation. Around 1545, Van Scorel's former pupil Maarten van Heemskerck had painted the Leuven scholar's portrait, which shows him pointing at a glass sphere.⁵⁷⁶ The fact that this commission went to Van Heemskerck suggests a closer relationship between the Leuven scholarly world and the northern network of learned painters around Van Scorel.

4.6. Conclusions

During the first half of the sixteenth century, painters played a crucial role in the cartographic development in the Low Countries and contributed to the region as one of the European centres of mapmaking and geographical sciences by the second half of the century. This intense collaboration between artists, humanist scientists and cartographers can be considered as an important precedent to the learned network around Abraham Ortelius, one generation later.⁵⁷⁷ As a result of the continuous regional battle against the North Sea, many of the cartographic commissions during the discussed time frame are related to hydrographical campaigns. Although these problems were traditionally dealt with by local building masters, often operating as municipal land surveyors, the visualisation of the area in the form of ground plans and maps, was often relayed to a local painter. As their familiarity with geometrical principles and trigonometry increased, so did their involvement shift from a purely aesthetic role towards an active input in the technical and scientific design process. In some cases, such as with Lanceloot Blondeel, these basic geometrical principles were most likely being transmitted through family connections, with their roots firmly in masonry traditions and the building practice. Although often assisted by land surveyors or geometers, painters did not have to rely on them for their know-how in triangulation. The importance of oral dissemination of geometrical knowledge through established social networks among individual workshops can hardly be underestimated. Learned painters such as Blondeel, Pourbus, the Horenbout family, Van Scorel, Vermeyen, Van Oostanen, Anthonisz. and Croock were all players in a closely intertwined network in which a keen interest in geometry had become a crucial skill within workshop practice. Of equal importance were the contacts between these workshops and their access to the Leuven scholarly circle of Gemma Frisius, either through more direct contact such as Van Heemskerck or Anthonisz., or on a theoretical level by studying Frisius' treatise on triangulation (as in the case of Pourbus).⁵⁷⁸ Despite their later historiographic image, the cartographic endeavours of painters were never considered as side-business alongside their more

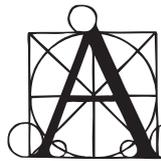
⁵⁷⁵ Another explanation for the specific geometrical content in the sketchbook, might be through Jacopo de' Barbari himself, who had stayed at the Court of Margaret of Austria between 1511 and 1516.

⁵⁷⁶ Rotterdam, Museum Boijmans Van Beuningen, inv. 1347.

⁵⁷⁷ Meganck 2017.

⁵⁷⁸ Huvenne 1984, p. 278.

regular commissions but rather helped to elevate the social position of the artist as expert in both the art and science of geometry.



·PART II·

ARCHITECTURE IN THE AGE OF
MECHANICAL REPRODUCTION

The impact of the burgeoning print market on the European artistic practice by the last quarter of the sixteenth century can hardly be underestimated. Along with Gutenberg's print revolution, printed images were a central feature in reshaping systems of knowledge and thought throughout Europe.⁵⁷⁹ Not only did the printed image generate an increase of iconographical material and themes, it greatly contributed to the spread of architectural knowledge far beyond the restrictions of building lodges and guild monopolies.⁵⁸⁰ This was particularly the case with the dissemination of the first architectural treatises which allowed a varied reading audience consisting not only of architects but a number of different craftsmen and interested dilettantes. Elizabeth Eisenstein remarks in her influential study on the impact of print culture, that in fields of learning, such as architecture, print culture increased the functions performed by images while reducing those performed by words. 'It was not the printed word, but the printed image which became the savior for Western Science'.⁵⁸¹ The addition of printed images to previously unillustrated architectural treatises such as Vitruvius' *Ten Books on Architecture* had a tremendous impact on the perception and dissemination of a novel architectural language.⁵⁸² Research on the impact of mass-production of architectural images through the use of the printed image focused strongly on the role played by Vitruvian texts and the Renaissance theory of the five architectural orders (Tuscan, Doric, Ionic, Corinthian, Composite) as it was re-invented and defined by Sebastiano Serlio, particularly in his *Fourth Book* (1537).⁵⁸³ It was only two years later, in 1539, that Pieter Coecke van Aelst (1502 – 1550) would create his Dutch (unauthorized) translation of Serlio's treatise, published in Antwerp by Gillis Coppens van Diest.⁵⁸⁴ Through this publication and translations of Serlio's other volumes in Dutch, German and French, Coecke would not only become the main catalyst for the Serlian interpretation and standardization of the Antique style in the Low Countries, but for transalpine Europe in general.⁵⁸⁵ From the late 1520s onwards the illustrated editions of Vitruvius and subsequently the system of the Five Orders as proposed by Serlio and promoted by Coecke had become increasingly influential in the Habsburg courtly circles.⁵⁸⁶ Already in 1535, the newly erected palace in Breda of Henry III of Nassau (1483-1538) takes its classicizing elements directly from published sources, most notably Cesariano's 1521 Vitruvius edition and Diego de Sagredo's (1490 – 1528) *Medias del Romano*, published in Toledo in 1526.⁵⁸⁷ In 1539, the year of the publication of both his Vitruvian treatise *Die Inventie der Colommen* and Serlio's *Fourth Book*, Coecke was named *artiste*

⁵⁷⁹ Ivins 1953; Burke 2000, p. 150-2.

⁵⁸⁰ On the influence of printed images on the dissemination of scientific knowledge, see Dackerman 2011.

⁵⁸¹ Eisenstein 1983, p. 42.

⁵⁸² Rowland 1998; Carpo 2001, pp. 16-22.

⁵⁸³ On the relationship between printed media and architectural theory, especially see Payne 1999, pp. 113-43; Carpo 2001.

⁵⁸⁴ De la Fontaine Verwey 1976; Rolf 1978; De Jonge 1998b; De Jonge 2004; De Jonge 2007, pp. 42-49.

⁵⁸⁵ De Jonge 1998b; De Jonge 2007, p. 41.

⁵⁸⁶ Van den Boogert 1992; Van den Boogert 1998; De Jonge 2007, pp. 55-86.

⁵⁸⁷ Van Wezel 1999.

de l'empereur, and in 1548 he describes himself as painter to Mary of Hungary (1505-1558), who was quick to embrace the Serlian antique norm.⁵⁸⁸ The designs for Mary's palaces at Binche, Mariemont and Boussu in the mid-1540s by sculptor-architect Jacques Du Broeucq's, take direct inspiration from the Vitruvian and Serlian canon.⁵⁸⁹ Perhaps the most public and elaborate showcase of Serlian orders and ornament was the famous 1549 Triumphal Entry of Philip of Spain into Antwerp, as part of the aspiring princes' introductory tour in the Low Countries between 1548 and 1550.⁵⁹⁰ The joyous entry remains especially tangible thanks to the illustrated accounts of the event, published by Cornelis Grapheus and Pieter Coecke van Aelst in 1550.⁵⁹¹ The impact of Serlio's architectural and ornamental vocabulary after the death of Coecke would not only be visible in the built edifices such as the Antwerp town hall, but was also quickly adopted by Antwerp painters such as Joachim Beuckelaer (1534-1574) and his uncle Pieter Aertsen (1505-1575) who made extensive use of Serlio's treatises in their kitchen- and market scenes.⁵⁹² Although the impact of Vitruvian and Serlian treatises has received scholarly attention, the effect of single-sheet architectural and ornament prints on the perception and assimilation of the Antique style before Coecke's publications in 1539 has received less far less attention.⁵⁹³ The following chapter focusses on the role of the printed image in the dissemination of architectural understanding in the Low Countries during the first half of the sixteenth century before the process of standardization through the publication of Serlio. While scholars such as Mario Carpo have argued that the publication of illustrated treatises led to the formation and standardization of the architectural canon itself, there was an earlier generation of artists for which individual architectural and ornament prints have functioned as a source of creativity, inspiration and artistic emulation.⁵⁹⁴ As a case-study on the influence of architectural prints in the search for a local Antique identity, we will explore the printed sources which contributed to the dissemination of Lombard and Bramantesque architectural language in the Low Countries during the first three decades of the sixteenth century. Since it is our understanding that a painter's knowledge of the Antique style and ornament was a key element in explaining their increased involvement in architectural and decorative design projects, it is vital to track the variety of sources used. The second part of this chapter will focus on the role of the early engravers as key figures in the dissemination. It is a well-known and established fact that the origins of early print making bare a close relationship with goldsmith workshops, with Albrecht Dürer as the most celebrated representative of this development. Surprisingly, the printed

⁵⁸⁸ De Jonge 2007, p. 46.

⁵⁸⁹ De Jonge 1998c; De Jonge 1999.

⁵⁹⁰ Parker 2014, pp. 35-40.

⁵⁹¹ Kuyper 1994, pp. 7-78; Meadow 1998; Becker 2002; De Jonge 2007, p. 45; Bussels 2012; Wouk 2018, pp. 138-45.

⁵⁹² Lunsigh Scheurleer 1947; Moxey 1976.

⁵⁹³ Notable exceptions are Jantzen 1910, pp. 54-96; De Jonge 2007, pp. 21-40; Heringuez 2008; Heringuez 2011; De Jonge 2010b; De Jonge 2011; Kavalier 2011; De Jonge 2018.

⁵⁹⁴ Carpo 2001, esp. 42-56. Others have nuanced this dominant influence of printed and illustrated treatises on architectural theory and ornamental language. Zerner 1988; Brothers 2010, p. 97; Waters 2012.

output of these early engravers for goldsmith- and architectural design is a field which gained little attention by print scholars so far. I will therefore explore the professional position and production of this new genre of ornament prints from goldsmith-engravers in the Low Countries such as the master mason Alart Du Hameel (c. 1460 – c. 1506) or the anonymous Master W (active c. 1465-95). A major part of these engravers' output consisted of designs for metalwork such as reliquaries, censers, chalices, and crosiers. By providing designs for a wide range of craftsmen - ranging from architects, over wood carvers to goldsmiths – this group of goldsmith-engravers can be interpreted as intermediate players in the dissemination of geometrical designing knowledge towards a great variety of media.

5. Prints, painters, and the development of the Antique Utopia

“Painters and poets have always had the prerogative of daring anything. We know it, and both demand and grant the same licence”.

- Horace, *Ars Poetica*, l.

In the opening lines of his *Ars Poetica*, Horace lauds and admires the artistic licence of artists, since they can envision things that escaped the boundaries of reality. With words, lines and paint they could construct and envision worlds which were unbound by the limitations of practical laws of nature or financial restrictions. In Thomas More’s celebrated *Utopia* (1517), the fictitious character of Raphaël Hythlodæus visits the house of Pieter Gillis (1486-1533) in Antwerp, where he relates of his visits to the legendary island. It is perhaps no coincidence that at the time when Thomas More’s most famous work was published by the Leuven publisher Dirk Martens, Netherlandish artists were constructing their own Utopian interpretations of antique architecture. Their Antique realities were often based on snippets and scraps of what ‘real’ antiquity looked like, combining a great variety of fragments and ornaments such as baluster columns, grotesques, candelabras, putti, mascarons, medallions, vases and pilasters. Their architectural language was not strictly a Vitruvian one, but rather a vernacular assemblage of all things antique based upon migrating models exchanged between workshops and their artists. The main source material for the fragmentary construction of the Antique were single sheet architectural prints, rather than illustrated treatises.

5.1. Loose sheet architectural prints and the Antique

When visiting the Low Countries between August 1520 and July 1521, Albrecht Dürer frequently used his popular prints series as a means of currency.⁵⁹⁵ On several other occasions Dürer mentions in his travel diary large amounts of prints which he trades with fellow artists in Antwerp, Mechelen, Brussels or other artistic hubs in the Low Countries.⁵⁹⁶ It is perhaps one of the more outspoken cases in which prints were valued as a commodity by artists and artisans alike in the early sixteenth-century workshop practice. The importance of prints in artist’s workshops dates to the emergence of the medium itself. Not only prints by Dürer, but many other prints by printmakers active between the 1480s and 1520s were used as inspiration for Netherlandish painters in the reinvention and renewal of their compositions and pictorial ideas. By the late 15th century, the traditional workshop stock of

⁵⁹⁵ On Dürer’s journey to the Low Countries, see Held 1931; Brussels 1977; Unverfehrt 2007; Eichberger 2010; Ashcroft 2017, pp. 545-89.

⁵⁹⁶ Ashcroft 2017, p. 556-57

drawings which served as compositional models was enriched by a stock of innovative prints. Compositions invented by master painters such as the Master of Flémalle or Rogier van der Weyden were now accessible to a geographically wide area of painters thanks to the first generation of printmakers like Master FVB (active 1475-1500), Master IAM of Zwolle (active 1470-1495), or Israel van Meckenem (1440-1503).⁵⁹⁷ Stephen Goddard recently examined how prints by German printmakers such as Martin Schongauer (c. 1430-1491), Lucas Cranach the Elder (1472-1553), Hans Baldung Grien (1484-1545) or Albrecht Altdorfer (1480-1538) had quickly become an indispensable addition to the existing tradition of workshop drawings and models in the shops of painters such as Quinten Metsys, Jan Gossart or the group of painters once labeled by Max Friedländer as the Antwerp Mannerists.⁵⁹⁸ Although the influences of German printmakers on the Netherlandish art production have been acknowledged, few have looked at the use of prints in the development of a vernacular Antique style in accordance with the changing humanist taste patterns of the courtly and urban clientele.⁵⁹⁹ Painters, and printmakers alike, were at the forefront of this stylistic innovation almost a generation before Netherlandish master masons or even sculptors equally applied a more Antique style alongside the *modern* Gothic ornamental language. The expertise in the new style of members of the guild of St Luke (painters, figural sculptors, book illuminators, etc.) prior to many members of those of associated to the mason's guild may have been a decisive factor in the development of the phenomenon of the painter-architect.

Although some printed editions of Vitruvius, such as Fra Giocondo's 1511 edition of *De Architectura*, circulated in learned circles, many Netherlandish painters who were without the financial means to travel abroad would have to rely heavily on other printed representations of the Antique as a main source to build their novel ornamental and architectural language. Ornamental motives such as candelabra decoration, capitals and baluster columns were transferred or "migrated" between workshops spread out over the European continent.⁶⁰⁰ As a case-study in the use of architectural prints by Netherlandish artists, we will be looking at the reception and assimilation of Lombard ornament prints around the circle of the architect Donato Bramante (1444-1514). This development is preceded by a short contrasting analysis of the architectural language used by Jan Gossart, who was working in a courtly context with a developing humanist interest for architectural innovations, had who had the rare opportunity to study antiquity and Italian architectural novelties in situ.

⁵⁹⁷ Metzger 2010.

⁵⁹⁸ Goddard 2004-2005. On the term and historiography of Antwerp Mannerism, see Born 2004-2005.

⁵⁹⁹ Zerner 1988; Waters 2012; De Jonge 2010b; De Jonge 2011; De Jonge 2013a; Fuhring 2013.

⁶⁰⁰ Eckhardt Leuschner recently proposed the idea of *migration* of ornamental and architectural knowledge, in favour of 'transfer'. Leuschner 2014.

5.2. The Privileges of the Court: Gossart's reception of Antiquity and Bramante

An exception to the often-homebound painters working in Bruges, Antwerp, Leuven and other urban cultural centers was Jan Gossart (1478-1532) who, as a court artist, was in the privileged position of having access to architectural treatises and being one of the first Netherlandish artists to have had the opportunity to study antiquity in Italy itself. Although already registered as a master painter in the Antwerp guild of St Luke in 1503, Gossart's painterly career really came to fruition when he entered the services of Philip of Burgundy (1465-1524), the last living bastard son of Duke of Burgundy Philip the Good (1396-1467).⁶⁰¹ In October 1508 he was a member of a diplomatic delegation headed by Philip of Burgundy, at the request of Margaret of Austria, to meet Pope Julius II (1443-1513) in Rome.⁶⁰² The embassy of sixty men left Mechelen, traveled through northern Italy and arrived in Rome in January 1509. Philip of Burgundy had a keen interest in antiquity which aligns with the emergence of humanist interest of northern aristocracy as a search for the local past and identity.⁶⁰³ According to Gerard Geldenhouwer (1483-1542), Philip's secretary who wrote his patron's posthumous biography in 1543, Philip had a profound fascination for architecture and especially for the Antique building manner:

*"If the conversation was about architecture, Philip knew about the dimensions, proportions, and symmetries of this art. He used to talk so expertly about bases, columns, epistyles, architectural moldings, and other things of this sort that you would think that he was reading specific pages of Vitruvius himself."*⁶⁰⁴

This knowledge of ancient architecture and antiquity in general was a feature which he had in common with Pope Julius II and may have been a key element for Margaret of Austria to send Phillip in the first place.⁶⁰⁵ Although Geldenhouwer's claim of his patrons' knowledge of Vitruvian principles, prior to the first printed version of Vitruvius (1511) seems to be little more than a hyperbole, Philip did take on his journey a promising artist with family roots in architectural design and who had already proven himself as an architectural draughtsman with drawings such as *The Emperor Augustus and the Tiburtine Sibyl*

⁶⁰¹ On Philip of Burgundy and his artistic patronage, see Sterk 1980; Bass 2016.

⁶⁰² On Gossart's sojourn in Rome, see Wauters 1904; Sterk 1980, pp. 99-101; Schrader 2010; Weidema & Koopstra 2012, pp. 8-11, nos. 2-3; Bass 2016, p. 46-52.

⁶⁰³ Bass 2016; Enenkel & Ottenheim 2018.

⁶⁰⁴ *'De Architectura erat sermo, noverat hic eius artis dimensiones, proportiones, symmetrias. De basibus, columnis, epistylis, coronamentis atque id genus reliquis adeo exacte disserebat, ut ex ipso Vitruvio eum singula legere putares. Si de fontibus, aquaeductibus, termis sermo incidisset, nihil harum rerum hunc latere adparebat.'* Geldenhouwer 1901, pp. 232-33. On Geldenhouwer, see Prinsen 1989; Bietenholz 1995, vol. 2, 82-84.

⁶⁰⁵ Schrader 2010, p. 50.

(c. 1503-1508) and *The Mystic Marriage of Saint Catherine* (1503-1508).⁶⁰⁶ The young Gossart was commissioned by Philip of Burgundy to record Rome's antique marvels in drawings, as recorded in his study drawings of ancient sculpture and architecture. Gossart's art would become the mediator through which Phillip's humanist and antiquarian ambitions would best be expressed.⁶⁰⁷ After their return to the Low Countries, Gossart would apply both antique and contemporary Italian architectural features in the commissions he received from his Netherlandish humanist patrons.⁶⁰⁸ Perhaps the most analyzed example is Gossart's *Neptune and Amphitrite* (1516), painted to be displayed in Philip's new palace in Souburg (fig. 5.1).⁶⁰⁹ While the two standing figures borrow heavily from Jacopo de' Barbari's *Mars and Venus* engraving⁶¹⁰, the architectural framework surrounding them has been associated with the



Fig. 5.1. Jan Gossart, *Neptune and Amphitrite*, 1516. Oil on panel, 191 x 128,4 cm. Berlin, Staatliche Museen zu Berlin, Gemäldegalerie Inv. 648. Photo: © Gemäldegalerie Berlin.

Doric Temple as it was depicted in the first illustrated printed edition of Vitruvius by Fra Giocondo in 1511 and with presumed sketches made by Gossart from the Basilica Aemalia on the Forum Romanum.⁶¹¹ Equally interesting is the architecture used in his *Danae* (1527, fig. 5.2), probably commissioned by Adolf of Burgundy (1489-1540).⁶¹² The round temple in which the princess of Argos receives Jupiter's golden rain, resembles round monopteros temples such as the temple of Hercules Victor on the Forum Boarium. In her analysis of Gossart's architecture, Samantha Heringuez recognized Bramante's *Tempietto* (1502) as one of the prime inspirations for Danae's edifice.⁶¹³ Unlike ancient

⁶⁰⁶ Staatliche Museen zu Berlin, Kupferstichkabinett, inv. KdZ 15295; Statens Museum for Kunst, Copenhagen, inv. KKSgb4828; New York 2010, pp. 318-20, 362-364, nos. 69, 91.

⁶⁰⁷ On Philip of Burgundy's quest for a Netherlandish antiquity and Gossart's role, especially see Bass 2016.

⁶⁰⁸ Heringuez 2008; Kavalier 2010; Heringuez 2011.

⁶⁰⁹ Staatliche Museen zu Berlin, inv. 648. In the context of Philip of Burgundy's position of admiral of the Burgundian Fleet and his quest for local antiquity in Zeeland, the painting has recently been reinterpreted as a depiction of *Neptune and Zeelandia*, see Bass 2011.

⁶¹⁰ De' Barbari had stayed at Philip of Burgundy's court in 1510. Duverger 1931; Duverger 1980; Bökem 2016, pp. 258-71.

⁶¹¹ Herzog 1963, p. 34; Mensger 2002, pp. 82-84; Heringuez 2008, pp. 111-14; Kavalier 2010, p. 34-35.

⁶¹² Bass 2016, pp. 132-38.

⁶¹³ Heringuez 2011, pp. 230-36.



Fig. 5.2. Jan Gossart, *Danaë*, 1527. Oil on panel, 114,3 x 95,4 cm. Munich, Bayerische Staatsgemäldesammlungen, Alte Pinakothek. Inv. 38. Photo: © Alte Pinakothek Munich.

examples of round temples in Rome, Bramante's temple in *San Pietro in Montorio* is crowned with a hemispherical dome placed on a cylindrical drum and its interior columns or pilasters rest upon high pedestals. Indeed, there is a considerable influence of Bramante on Gossart's architectural inventions and a meeting between the two artists is not unconceivable.⁶¹⁴ When the diplomatic delegation of

⁶¹⁴ This influence was first noticed by Dacos 1964, p. 21 and further developed in Heringuez 2011; Kik 2014b.



Fig. 5.3. Jan Gossart, *St Peter* (Side panel from so-called Salamanca Triptych), 1521. Oil on panel, 120 x 47 cm. Toledo, Museum of Art Ohio. Inv. 1952.85A,B. Photo: © Museum of Art, Ohio.

Philip of Burgundy arrived in Rome, Bramante was the most famous living architect and works on the new Basilica of St. Peter had recently been started in 1506. Bramante had a very close and personal relationship with Pope Julius II, and they were known to discuss architecture and the arts in the context of the ambitious pope's plan to reshape the urban fabric of the eternal city.⁶¹⁵ At the time when the Netherlandish embassy arrived in Rome, in January 1509, works had begun on the four main piers of the basilica.⁶¹⁶ Both in his *Saint Luke drawing the Virgin* (1513) in Prague as in the interior of the wings of the Salamanca triptych in Toledo, showing *Saints John the Baptist and Peter*, Gossart makes an unambiguous reference to a typical Bramantesque motif of a vaulted apse ending in a shell (fig. 5.3).⁶¹⁷ Bramante not only used this motif during his early years in Milan but also applied it in his Roman projects of St. Peter's and the choir of Sta. Maria del Popolo (1505-09).⁶¹⁸ A preparatory study drawing depicting *The Adoration of the Magi* (c. 1515-1520) in the Lehman Collection, which has recently been re-attributed to Gossart, affirms the familiarity of the draughtsman with Bramante's construction site of St. Peter's (fig. 5.4).⁶¹⁹ The figures in the foreground seem to dissolve into the architectural extravaganza that surrounds them. The coffered arch above the holy family strongly resembles that of the Basilica Maxentius or Bramante's construction site. The artist also shows unfinished parts of the edifice on the left side, which underline the building's unfinished state.⁶²⁰

⁶¹⁵ Frommel 1988, pp. 50-53; Rowland 1998, p. 109.

⁶¹⁶ Bruschi 1976.

⁶¹⁷ Prague, Narodní Galerie, inv. VO 1261; Toledo (Ohio), Toledo Museum of Art, inv. 1952.85a-b.

⁶¹⁸ Heringuez 2011, p. 244

⁶¹⁹ New York, Metropolitan Museum of Arts, Lehman Collection, inv. 1975.I.832; New York 2010, pp. 331-33, no. 76.

⁶²⁰ Similar ruins are included in the background of Gossart's *Holy Family*, Bilbao, Museos de Bellas Artes y de Arte Moderno, inv. 69/110.

When interpreting the architectural setting of the Lehman drawing one can distinguish a front area leading up to a second central area, connected on the left with the unfinished or ruined section. This makes it possible to assume that the Adoration itself takes place in an apse of the central crossing of a building that is being erected, like the original Bramante design for St.-Peter's.⁶²¹



Fig. 5.4. Jan Gossart, *Adoration of the Magi*, ca. 1515-20. Pen and brown ink over black chalk, 28,3 x 20,3 cm. New York, The Metropolitan Museum of Art, Robert Lehman Collection. Inv. 1975.I.832. Photo: © Metropolitan Museum.

⁶²¹ Contemporary to Gossart's visit to Rome, between 1509 and 1511, also Raphaël (1483-1520) famously took inspiration from Bramante's building project when designing the architectural surroundings of the *School of Athens* in the Stanza della Signatura.

5.3. Bramante, between court and urban market: The Prevedari engraving as a source for the Antique.

In the first decades of the sixteenth century, few painters had been in the privileged position to study antiquity and architectural novelties in Italy or had the availability of architectural treatises to supply in the growing demand for Antique ornament and architectural features. The vast productivity of and growing demand for carved and painted altarpieces in the booming Antwerp art market quickly generated a market situation which relied on proto-industrial working methods which made use of stock compositions and models; a process which had started in Bruges by the end of the fifteenth century in the workshops of Gerard David, Hans Memling and Adriaen Isenbrandt.⁶²² The demand for luxury products in Antwerp, coincided with the changing taste patterns of the urban middle-class.



Fig 5.5. Cornelis Engelbrechtz., *Double portrait of Dirk Ottensz.*, 1518. Oil on panel, 56 x 70 cm. Brussels, Royal Museum of Fine Arts of Belgium. Inv. 2586 and 2587. Photo: © KMSKB, Johan Geleyns / Ro Scan.

Stimulated by public affairs such as Antique styled Joyous Entries, this urban middle class quickly adapted the courtly taste for the antique. Merchants and humanists made a fashion statement by

⁶²² On early sixteenth-century working methods on the art market and copying practice, see Wilson 1998; Vermeylen 2003; Martens and Peeters 2006, pp. 211-22; Leeftang 2004-05, pp. 159-232.

having their portraits adorned with Antique-looking ornament or architecture. In 1518 the wealthy beer brewer and later burgomaster of Leiden Dirk Ottensz. commissioned a double portrait from the workshop of Cornelis Engelbrechtz. The couple displays their prosperity to the beholder: while Ottensz is holding a delicate and pricey prayer nut, the couple is seated in front of a window showing a city view of their recently purchased house and brewery on the Hoogewoerd (fig. 5.5).⁶²³ To emphasize their sophistication they are both shown sitting in front of an Antique shell-niche, visually connected by a garland held by two monkeys (a liberal variation on the traditional motif of putti holding garlands). Similarly, the portrait by Jan Mostaert (1475-1555) of Abel van Coulster (1477-1548), adviser to the Court of Holland, shows the knight on a terrace in front of an Antique loggia with a grotesque decorated pilaster, topped with putti playing with armour (fig. 5.6).⁶²⁴ Lastly, perhaps the best-known example of Netherlandish humanist appropriation of the Antique is Hans Holbein the Younger's famous portrait of Desiderius Erasmus of 1523, in which the elderly humanist scholar is portrayed seated in front of a candelabra pilaster with a Lombardian capital with a fantasy mermaid-like figure with foliage (fig. 5.7).⁶²⁵ Merchants, court officials and the leading figure of Netherlandish humanism alike, they all considered the inclusion of Antique ornament and architecture in their portraits as a significant representation of their good taste and erudition. Sources for these antique elements were often found in ornament prints. The figure in the capital of Erasmus' portrait is a common motif in ornament prints of Agostino Veneziano



Fig. 5.6. Jan Mostaert, *Portrait of Abel van Coulster.*, c. 1515. Oil on panel, 89,5 x 56 cm. Brussels, Royal Museum of Fine Arts of Belgium. Inv. 2935. Photo: © KMSKB, Johan Geleyns.



Fig. 5.7. Hans Holbein the Younger, *Portrait of Erasmus of Rotterdam*, 1523. Oil on panel, 76 x 51 cm. London, The National Gallery of Art. Inv. L658. Photo: © National Gallery London.

⁶²³ Brussels, Royal Museums of Fine Arts of Belgium, inv. 2586. Leiden 2011, pp. 220-21.

⁶²⁴ Brussels, Royal Museums of Fine Arts of Belgium, inv. 2935.

⁶²⁵ London, National Gallery, inv. L658. Rowlands 1985, no. 13; Buck 1999, pp.44-51.

and Marco Dente (1493-1527) (fig. 5.8).⁶²⁶ In the Low Countries the motif was also used by Lucas van Leyden in one of his ornament prints.⁶²⁷ The putti playing with armor is similarly a very widespread motif in German prints by Master E.S. (c. 1420-1468) or Hans Sebald Beham (1500-1550), and in Lucas van Leyden's ornamental oeuvre.⁶²⁸ Although ornament prints partly answered the demand for antique sources in painter's workshops, their application in constructing complete architectural unity often resulted in a fragmented collage of individual elements such as entablatures, bases, columns, capitals, garlands or grotesque motifs.



Fig. 5.8. Agostino Veneziano, *Frieze with foliage and ornament*, 1520. Engraving, 10,4 x 24,6 cm. Amsterdam, Rijksmuseum, inv. RP-P-OB-9126. Photo: © National Gallery London.

In the late fifteenth century prints of significant ancient or newly built structures were hardly available; in the Low Countries it was not until when Hieronymus Cock published his series of Roman ruins in 1551, that prints on antique architecture outgrew their strictly ornamental focus.⁶²⁹ The first prints of full architectural edifices were buildings which had sprung from the imagination of architects and visual artists, such as the illustrations in Francesco Colonna's *Hypnerotomachia Poliphili* (1499).⁶³⁰ An important solution in the search for a representation of a more coherent architectural Antique interior was the so-called Prevedari engraving (fig. 5.9). The original contract of 24 October 1481 stipulated that the engraver was to work for day and night on the engraving, by closely copying the original drawing by Bramante.⁶³¹ The engraving generally considered as one of the earliest expressions of Bramante's architectural language and was painstakingly designed by the Milanese engraver

⁶²⁶ Bartsch XIV, no. 396.564; Bartsch XVI, no. 350.30; De Jong & De Groot 1988, nos. 597 and 643.

⁶²⁷ Hollstein 1947-2020, no. 169.

⁶²⁸ Hollstein 1947-2020, no. 168; Leiden 2011, p. 313, no. 108.

⁶²⁹ Bevilacqua 2014. On Cock's Roman ruin series, see Riggs 1977, p. 264; Fuhring 2013; Leuven 2013, no. 9.

⁶³⁰ Pérez-Gómez 1998; Pericolo 2009. For the influence of the *Hypnerotomachia Poliphili* in the Low Countries, see Kavalier 2010.

⁶³¹ Alberici 1978.

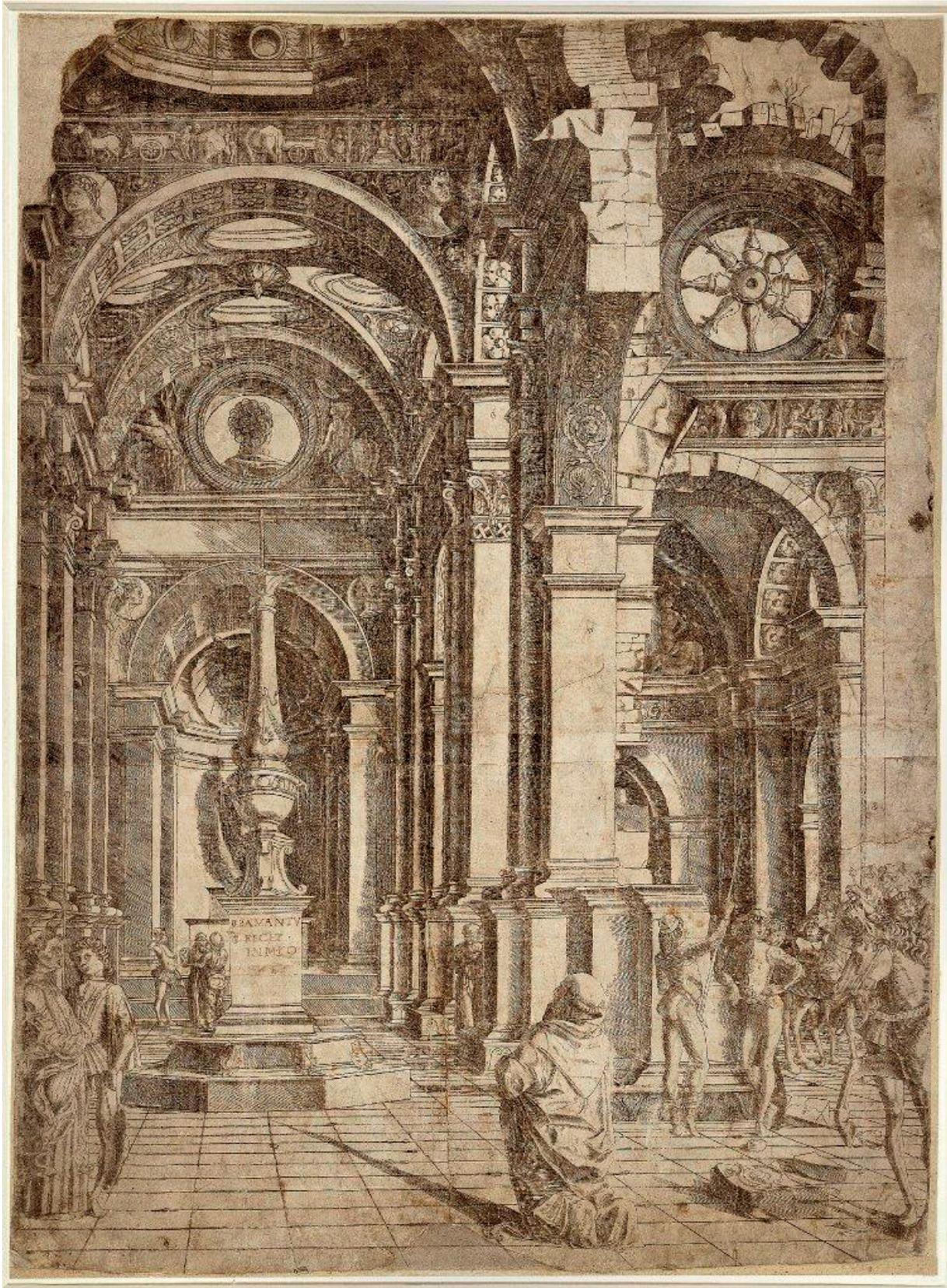


Fig. 5.9. Bernardo Prevedari, after Bramante, *Interior of a ruined church or temple*, 1481. Engraving, 70,8 x 51,2 cm. London, British Museum. Inv. V,1.69. Photo: © British Museum.

Bernardo Prevedari, making it the largest engraving on a single plate at the time of its creation.⁶³² The iconographical meaning of the engraving is still enigmatic.⁶³³ The original contract simply describes it as ‘*a print with figures and buildings*’, which does not provide any further clue about the iconographic meaning.⁶³⁴ The lack of references in the contract to its iconography seems to suggest that its subject is the architectural setting itself. An elderly figure kneels in front of a column, set in a richly decorated, decaying antique temple. This scenographic space is often seen as a prelude to some significant architectural features which would later appear in Bramante’s built oeuvre. According to Arnaldo Bruschi, the reconstruction of the ground plan of the edifice would represent a cross inscribed in a square topped with a cupola, not unlike Bramante’s original design for St. Peter’s Basilica a few years later.⁶³⁵ Matteo de’ Fedeli (c. 1450-1505), who commissioned the engraving of the drawing, must have been aware of the commercial value of the new medium of printed images for the dissemination of architectural ideas. Matteo, who was himself a painter, might have intended the commission as a model for architectural backgrounds for other colleagues. The fact that only two copies of the print have survived, one in Milan and the other in London, seems to be a sign of the print’s immense popularity rather than a limited print run. Its use as a painter’s workshop model is also supported by the presence of prick holes in the London copy.⁶³⁶



Fig. 5.10. Alejo Fernández, *The Flagellation of Christ*, ca. 1515. Oil on Panel, 48 x 35 cm. Madrid, Museo del Prado, inv. P001925. Photo: © Prado.

⁶³² On the exceptional size of the print, see Landau & Parshall 1994, pp. 106-7.

⁶³³ Hind 1948, pp. 102-04, no. 1. The iconography of the print has been interpreted as St. Ambrose or the apostle St. Barnabas. Recently Christian Kleinbub re-interpreted the print as a dialectic discussion on the idea of image making within an intellectual humanist context. Kleinbub, 2010, pp. 412-58.

⁶³⁴ ‘*stampam unam cum beneficiis et figuris*’. For a complete transcription of the original contract, see Alberici 1978, pp. 52-54.

⁶³⁵ Bramante would already bring this idea into practice in the *Pietà Chapel* of the *Sta. Maria presso San Spirito* (1482) in Milan. Bruschi 1967, pp. 51-54

⁶³⁶ Aldovini 2009, pp. 38-45.

Copies of the print or model drawings after the print surely circulated in German workshops by the beginning of the sixteenth century, especially in the so-called Danube School. Albrecht Altdorfer (1480-1538) made use of the Prevedari engraving in several panels of his *St Sebastian Altarpiece* (1512-1518), and Wolf Huber (c. 1485-1553), often described as a close collaborator to Altdorfer, applied Bramante's architectural features in his *Presentation in the Temple* (1521), as part of the *St Anna Altarpiece*.⁶³⁷ The architectural appeal for the print was also noticeable on the Iberian Peninsula, since the Seville painter Alejo Fernández (c. 1475-1545) mirrored it for his representation of a temple in his *Flagellation of Christ* (fig. 5.10).⁶³⁸ The presence of the Prevedari print in French workshops can also be confirmed by its application in an early sixteenth-century panel attributed to the Master of St Giles (active 1490-1510). His *Presentation in the Temple* (c. 1500) reproduces the general outlines of the original engraving's architecture (fig. 5.11).⁶³⁹ Unlike Fernández' faithful reproduction of the architecture, this panel takes certain creative liberties with the original model, as the baluster column is slightly altered and placed more to the background of the scene, and the frieze decorated with low-relief is now placed above the niche in the background. Although the Master of St Giles was active in Paris, he was heavily influenced by the Low Countries,

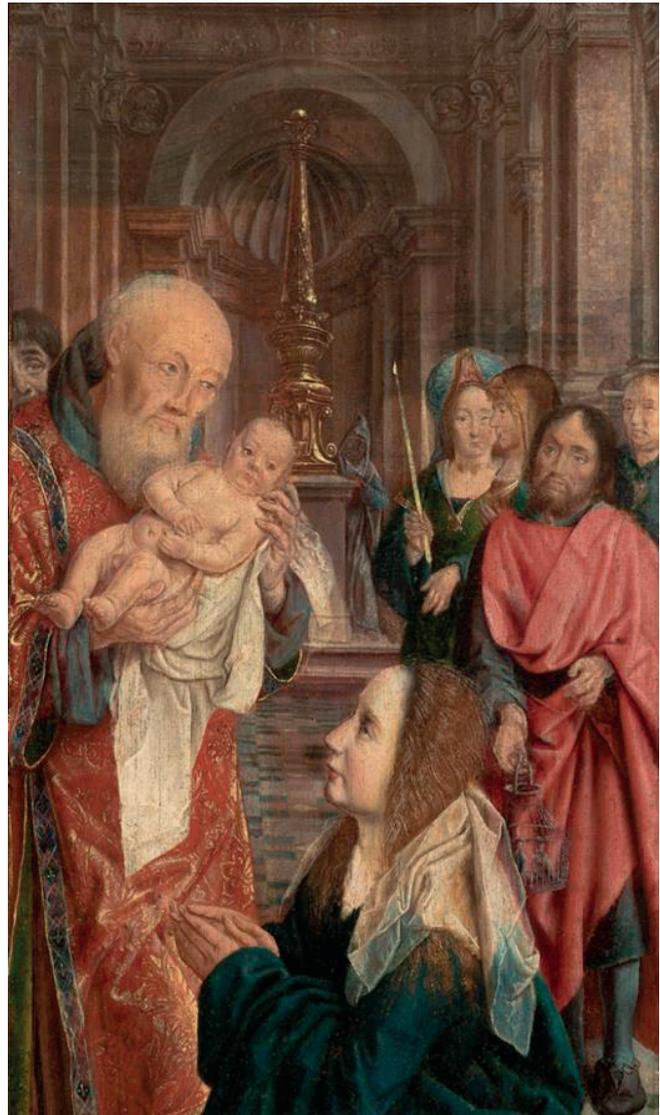


Fig. 5.11. Master of St Giles, *The Presentation in the Temple*, ca. 1515. Oil on Panel, 27,5 x 16 cm. Rotterdam, Museum Boijmans Van Beuningen, inv. 2462. Photo: © Museum Boijmans Van Beuningen.

⁶³⁷ Feldkirch, Museen Vorarlberg, inv. 0089.

⁶³⁸ Madrid, Museo del Prado, inv. P001925. Technical research of the underdrawings of the panel has revealed the use of pouncing holes, which would have been generated from the transfer from the print to the panel. Iñiguez 1946, p. 12; Iñiguez 1953; Padrón Mérida 1984, p. 61; Garrido Pérez 1993, pp. 37-38.

⁶³⁹ Rotterdam, Museum Boijmans Van Beuningen, inv. 2462. An *Adoration of the Magi* by the anonymous Master of the Martyrdom of the Two St. Johns is comparable to the Rotterdam panel and might have been completed in the same milieu. Both the panels contain a hooded man in the background, as if the kneeling monk of the engraved example has risen and is now walking towards us. Friedländer 1967-76, vol. 11, pp. 34, 73, no. 62, pl. 64; Auctioned at Christie's, London, July 10, 1987, no. 55.

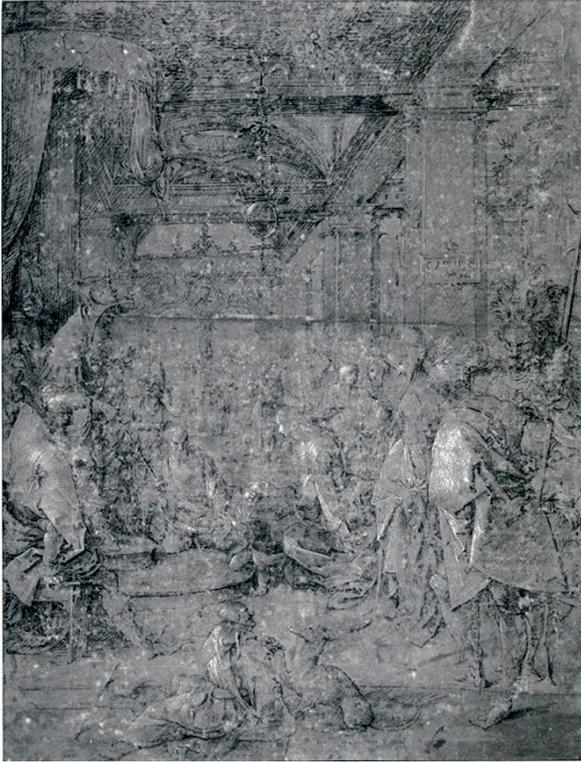


Fig. 5.12. Master of Amiens, *The Trial of Moses*, ca. 1511-19. Pen and black ink, with white wash on blue prepared paper, 48 x 35 cm. London, British Museum, inv. O.0.9.4. Photo: © British Museum.

where he possibly received his training.⁶⁴⁰ Also in Netherlandish workshops, the Prevedari engraving was being used in order to establish a convincing antique setting to a Christian narrative. In a drawing attributed to the anonymous Antwerp Master of Amiens, two popular prints served as a model for the architectural setting for the *Trial by Coals by the Young Moses* (1511-1518, fig. 5.12).⁶⁴¹ While the heavy beamed roof of the first two bays is borrowed from Albrecht Dürer's *The Presentation in the Temple*, from his popular *Life of the Virgin* series (1503-1505), the vaulted ceiling pierced with oculi is clearly inspired by the Prevedari print. This borrowing of elements of interest is common workshop practice. In his *Christ in the House of Simon* (c. 1510), a follower of Dirk Bouts working in the circle of Albrecht Bouts only included the typical cartwheel window as an Antique element.⁶⁴²

The reliance of Antwerp painters between 1500 and 1530 on the Prevedari print seems to have been rather high, especially for the depiction of ancient ruins in Adoration scenes. On the rising Antwerp art market, this subject had become one of the highest in demand for a new clientele of foreign merchants, mainly because of the mercantile associations of the Magi.⁶⁴³ Goddard already noticed a strong uniformity in the structures surrounding these Antwerp Adoration scenes and identified prints of Dürer and the Netherlandish Master IAM of Zwolle as possible models for these architectural structures.⁶⁴⁴ In addition, the Prevedari engraving served an equally dominant model for the dilapidated and ruined temples in which the Holy Family find its refuge. The *Adoration of the Magi* (c. 1520) by the so-called Pseudo-Blesius is a typical example of the mass-produced Adoration scenes by

⁶⁴⁰ Hand & Wolff 1986, p. 162.

⁶⁴¹ British Museum, inv. Oo,9.4. Ewing 1978, p. 324; Orth 1989; Ewing 2016, p. 115-16. Dan Ewing recently attributed the drawing to the Master of Amiens.

⁶⁴² Bruges, Sint-Janshospitaal, inv. SJO188.I. Henderiks 2011, pp. 71-78, 345-46; Leuven 2012, p.94-95, no. 3.

⁶⁴³ Ewing 2004; Vermeylen 2001, p. 41; Lichtert 2017, pp. 196-8.

⁶⁴⁴ Goddard 2004-2005, p. 131-36.



Fig. 5.13. Pseudo-Blesius, *Adoration of the Magi*, ca. 1520. Oil on panel, 74,6 x 64,5 cm. Munich, Bayerische Staatsgemäldesammlungen, Alte Pinakothek, inv. 708. Photo: © Alte Pinakothek Munich.

the Antwerp Mannerists in which the basic structure of the engraving may have served as a model (fig 5.13).⁶⁴⁵ Most likely produced in Antwerp in the artistic environment of Jan de Beer, the adoration scene takes place in a ruined church nave with tree subsequent bays, overrun by vegetation. The strong articulation of the candelabra decorated pilaster, the unbalanced relationship between architecture and figures and especially the element of the broken arch which intrudes the beholder's space on the left side of the painting, all seem to be a mirrored echo of the Milanese engraving. When examining other early sixteenth century Antwerp Adoration scenes, these same basic features reappear in the workshops of the Master of the Antwerp Adoration, Jan de Beer, or the Master of 1518.⁶⁴⁶

Thus far the use of the Prevedari engraving has been considered for the application of its Antique-looking architecture. For some artists the authorship of Bramante may also have been a decisive element in the popularity of the print as a favored workshop model.⁶⁴⁷ Lambert Lombard's (1505/06-1566) early *St Dionysius Altarpiece* (c. 1533) consciously pays tribute to the Italian architect by combining Bramantesque elements in the architectural settings of the panels.⁶⁴⁸ In the panel

⁶⁴⁵ Munich, Alte Pinakothek, inv. 708. Friedländer 1921; Antwerp 2005, pp. 54-55, no. 17.

⁶⁴⁶ Research on Antwerp Mannerists in the collection of photographic reproductions in the RKD The Hague finalized in a preliminary list of 76 works which accord to a same basic architectural structure, see Kik 2014b, p. 107, n. 45.

⁶⁴⁷ The Prevedari print specifically names Bramante as its inventor: BRAMANTU/S. FECIT./ IN MLO.

⁶⁴⁸ Liège, Musée Grand Curtius, inv. 3. Denhaene 1990, pp. 46-54.

depicting *St. Paul before the statue of the unknown Deity*, Lombard uses the Prevedari engraving as inspiration for the architectural setting (fig. 5.14).⁶⁴⁹ Interestingly, Lombard used a second Bramante-related design in *The Healing of the Blind Man* (the second panel of the altarpiece), as he based the architecture of the temple on a 1517 engraving by Agostino Veneziano (c. 1490-1540) of the bronze foundation medal by Caradosso showing Bramante's initial design for St Peter's.⁶⁵⁰ Lombard's interest in Bramante seems to have been instigated by his artistic training from the start. Since Lombard presumably received his first training in the workshop of Jan de Beer (c. 1475-1528) in Antwerp and continued his training in Jan Gossart's workshop in Zeeland,

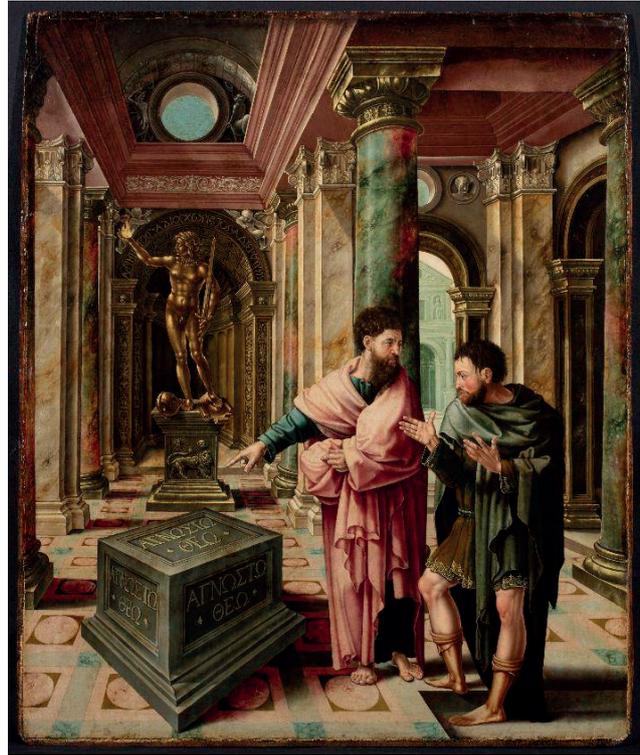


Fig. 5.14. Lambert Lombard, *St Paul before the statue of a pagan God*, ca. 1540. Oil on panel, 75,5 x 62,7 cm. Liège, Musée Grand Curtius, inv. 376. Photo: © KIK-IRPA.

familiarity with the Prevedari engraving and Bramante's architectural language is apparent.⁶⁵¹ During his artistic career in Liège, Lombard studied local and foreign antique and mythological heritage through the use of classical literature and archeology.⁶⁵² He discussed antiquity with like-minded humanists such as his patron the prince-bishop Érard de la Marck (1472-1538), Laevinius Torrentius (1525-1595), Abraham Ortelius, and Dominicus Lampsonius (1536-1599).⁶⁵³ Given this humanist network and erudition, Lombard's choice for these two Bramantesque sources seems to be far from arbitrary and fit well within the artist's search for historical and archeological accuracy in his depiction of antiquity. By the 1530s Bramante's posthumous fame had reached a highpoint and his style was being praised as the most perfect interpretation and assimilation of Antique architectural language. Perhaps the most famous accolades came from Serlio, when he included Bramante's *Tempietto* and the designs for St Peters in his *Third Book* (1540), dedicated to antique building typology.⁶⁵⁴ This contemporary admiration for Bramante's treatment of classical orders and ornament is adopted in

⁶⁴⁹ Technical examination of the panel has showed that the outlines of the architectural background overlap with the figures, and was directly copied from the engraving, see Krönig 1974, pp. 120-23; Liège 2006, pp. 134-35, 489-91, no. 126. In addition, the panel borrows its deity statue from a print by Marcantonio Raimondi. Denhaene 1990, p. 53

⁶⁵⁰ Bartsch, XXVI, p. 217, no.534.

⁶⁵¹ This is stated by Lampsonius in his biography of Lombard. Lampsonius mentions *Ursus* and *Mabuse* as Lombard's teachers before his departure to Italy. Hubaux & Puraye 1949, pp. 65-66; Becker 1973.

⁶⁵² On Lambert Lombard's treatment of antiquity, see Kemp & Kemp 1973; Wouk 2012.

⁶⁵³ On this Liège intellectual network, see Wouk 2012; Meganck 2017.

⁶⁵⁴ Serlio 1996, I, pp. 127-130.

Coecke's introduction to his translation of Serlio's *Third Book* (1546), in which the Antwerp painter praises the excellent buildings constructed in his own times, 'in particular those of Bramante'.⁶⁵⁵ Coecke repeated his praise for the famous Italian architect in the second edition of his *Fourth Book* (1549) when he commented that 'those in the Low Countries who had strayed from the correct manner of designing in the Antique manner and resorted to a monstrous and unappealing version of it, should go back to Bramante'.⁶⁵⁶ Within this context of courtly and urban humanist appraisal of Bramante as on par with the Vitruvian antique style, Lambert Lombard's assimilation of prints based on design of Bramante ought to be regarded as a conscious choice and instrumental in the search for an accurate and learned interpretation of the ancient past.

It is in this context of imitation, assimilation, and emulation that the architecture in an anonymous Netherlandish drawing, dated c. 1530, can be comprehended (fig. 5.15). Unsuccessful attempts have been made to attribute the drawing both to Aertgen van Leyden (1498-1564) and Nicolaas Hogenberg (c. 1500-1539).⁶⁵⁷ Although the drawing represents *St Peter healing the cripple in the Temple*, its subject matter is completely dominated by the architectural setting: an antique temple with a main vaulted nave leading to a huge central coffered dome. Many individual architectural fragments carry a Bramantesque signature, such as the shape capitals in the right bay and the medallions in the spandrels.⁶⁵⁸ Other elements, such as the impost blocks above the capital seem to go back to Brunelleschi's solutions for *S. Lorenzo* (1421-25) and *S. Spirito* (1436). Given the subject matter of the drawing, the draughtsman's prime intention may have been to evoke Bramante's *S. Peter's Basilica*. Yet the overall composition of the drawing with its viewpoint from inside the nave towards the central dome, with a second bay on the right, shows a great resemblance to the Prevedari engraving. The use of linear perspective also seems to have been applied in a similar directive manner. While the perspectival lines in the drawing converge in the head of the seated cripple, those in the engraving converge in the name of Bramante; on both occasions in the subject matter of the design. Although no literal quotations are made from the Milanese engraving, its architectural vocabulary and

⁶⁵⁵ "maer oock vanden excellenten edificien in onsen tijden/ ende bysondere van Bramante ghemaect", Coecke van Aelst 1546, fol. 1v.

⁶⁵⁶ "(...) ter contrarijen andere mogelijck de vuysterheyt vanden tertien varachtende oft oock duer ongeleertheit sijn so verre buyten screven gegaen in vele dingen datse niet alleene de redene ende exemplelen der goeder Antiquen en hebben verlaten, maer hebben bouwen datte haer werck monstruens ende onbevallijck der oogen gemaect gelijkmen dese erroren inden Antiquen sien mach. Waerduere, beminde lesere, dat hun veel Architecten in beyden geleert sijnde daer over becommert hebben ende bysondre in desen onsen tijden Bramant van Casteldurante, Balthasar van Sijzen ende meer andere midts dat so duer Julio II P.M. als duer andere de architecture grootelijck opgestaen is tot baren tijden". Coecke van Aelst 1549, fol. 1v.

⁶⁵⁷ Jantzen 1910, pp. 50-53; Wescher 1928; Van Regteren Altena 1939; Held 1942; Boon 1969, p. 58; Boon 1978, pp. 44-45, no. 122.

⁶⁵⁸ The Lombard capital with the dolphin-shaped volutes is also present in some architectural settings of Gossart. For example, *Virgin and Child with Saints Catherine and Barbara*, ca. 1510-15, Amsterdam, Rijksmuseum, inv. RP-T-1949-488. New York 2010, pp.324-26, no. 72.

overall composition is clearly present in the mind of the draughtsman.⁶⁵⁹ The loose dependence of this draughtsman on the Prevedari engraving also makes us re-assess Gossart's *Adoration of the Magi* drawing in the Lehman collection (fig. 5.4). While the architectural features may have been directly inspired from Gossart's first-hand experience at the St. Peter's building site, the spatial organization with small figures dominated by a Bramantesque space, seems to have been in dialogue with the engraved architecture.



Fig. 5.15. Aertgen van Leyden (circle of), *St Peter healing the cripple in the Temple*, ca. 1530. Pen and black ink, with grey, white and red wash, 40,2 x 29,8 cm. Amsterdam, Rijksmuseum, inv. RP-T-00-519. Photo: © Rijksmuseum.

⁶⁵⁹ A similar conclusion can be made from Gossart's Lehman drawing, discussed earlier.

5.4. Conclusions

The Prevedari engraving is just one of many antiquating sources for Netherlandish craftsmen to enable them the construction of their imaginary antiquity. It answered to a demand by painters working for different audiences. Courtly painters such as Gossart, Van Orley and Lombard provided for a changing taste pattern of the Habsburg elite in search for an individualized antique past. While having access to early architectural treatises and theory - such as the *Hypnerotomachia Poliphili* (1499)⁶⁶⁰, Sagredo and Cesariano's Vitruvius editions – these court artists supplemented their sources with loose sheet prints to be able to construct a sophisticated architectural language based on Vitruvian principles and with the application of northern Italian source material. The urban demand for the Antique 'fashion', was quick to follow the courtly taste for the Antique ornament and was more reliant on printed material. However, the urban art market and the courtly artistic environment cannot be seen independently but in constant dialogue. Both served an antiquarian interest for antique architecture and ornament by their clientele. While Gossart's painted architecture was able to offer an interpretation of Vitruvian antiquity which could rival Bramante's own antiquarianism, more industrial workshops working for an open-market (especially Antwerp) chose from a pallet of stock-ornaments and settings. Yet, in some cases these stock-ornaments found their origin in an antiquarian source such as the Prevedari-print. Even though the Prevedari print is only one of the many sources which helped to define a northern Antique utopia, it is exemplary for the process of assimilation. Few artists for whom the print was a source of architectural inspiration made a straight copy, but rather took elements and reshaped them as a method of assemblage. By reimagining and reassembling the individual fragments, drawn from prints, treatises or workshop models, artists were able to speak in a Bramantesque architectural language without literally quoting it.

⁶⁶⁰ Amsterdam, Rijksmuseum, inv. RP-T-00-519.

6. The Goldsmith-Engraver in the Low Countries and his role as intermediary in the dissemination of technical knowledge.

The last quarter of the fifteenth century saw the emergence of printed design handbooks or *Werkmeisterbücher* in the German-speaking lands.⁶⁶¹ Although they are sometimes treated as a response to Vitruvian theory or Alberti's *De Re Aedificatoria*, their approach is less theoretical.⁶⁶² They are manuals to instruct the reader in the principles of constructive geometry: rules of thumb in order to draw simple ground plans and elevations, based on the traditional *ad quadratum* and *ad trivium* method.⁶⁶³ The best known of these is perhaps Mathias Roriczer's (1435-1495) *Büchlein von der Fialen Gerechtikeit*, printed in 1486 in Regensburg. Roriczer was the city's master mason, as was his father Konrad before him.⁶⁶⁴ The booklet describes how a fellow craftsman was to design an elevation and ground plan of a pinnacle, based on the single geometrical figure of the square. The importance of basic Euclidian geometry in this is stressed by Roriczer's *Geometrica Deutsch*, published shortly after 1486. Contemporary to Roriczer's work, was a very similar booklet, the *Fialenbüchlein*, published by the Nuremberg goldsmith Hans Schmuttermayer in 1489. Existing manuscripts of such instruction manuals, such as Villard de Honnecourt's famous sketchbook and the *Steinmetzbuch WG 1572*, indicate that Roriczer and Schmuttermayer were continuing an older craft tradition and putting it to the printing press.⁶⁶⁵ The fact that both a master mason and a goldsmith from southern Germany felt the need to publish their craft knowledge through the printed medium is telling of how printing was explored as a means of instructing a larger audience of fellow craftsmen to design in the correct manner. In matters of design, demarcations between crafts and guilds did not obstruct technical knowledge to cross these too often anachronistic boundaries. It should be noted in this regard that Hans Schmuttermayer stresses in his prologue that he composed his book "for the instruction of our fellowmen and all masters and journeymen who use this high and liberal art of geometry".⁶⁶⁶ As previously explored in the first chapter, the ability to design architectural constructs through geometrical building principles was shared between a number of crafts in the medieval and early modern Low Countries. Architectural design was a skillset which master masons or independent traveling architects such as Rombout II Keldermans, shared with joiners, carpenters, metselrystrijders

⁶⁶¹ Shelby 1977; Shelby 1979; Recht 1988; Coenen 1990; Müller 1990; Bork 2011b, pp. 15-17.

⁶⁶² See, for example, Recht 1988; Coldstream 1991, p.33; Coldstream 2002, p.71. Although the publication of Roriczer's booklet was dedicated to the humanist Prince-Bishop Wilhelm von Reichenau (1426-1496), the content of the manual does not suggest any knowledge of or reaction to Alberti's architectural theory.

⁶⁶³ The term was coined by Shelby 1977.

⁶⁶⁴ Shelby 1977.

⁶⁶⁵ On the *Steinmetzbuch WG 1572*, see Pauken 1979.

⁶⁶⁶ Shelby 1977, p. 58.

and goldsmiths alike. By printing their geometrical design knowledge architects and goldsmiths such as Roriczer and Schmuttermayer had not only become their own printer and publisher, but by illustrating their booklets they also became engravers.⁶⁶⁷ The inclusion of two rather modest copperplate engravings in Schmuttermayer's treatise facilitated the viewer in the understanding the geometrical design principles (fig. 6.1). With the inclusion of engraved images in the booklet, he represents the late fifteenth-century phenomenon of goldsmiths (but also stone masons and wood carvers) who considered engraving (and to lesser extent, etching) as a means of disseminating their technical skill and knowledge.

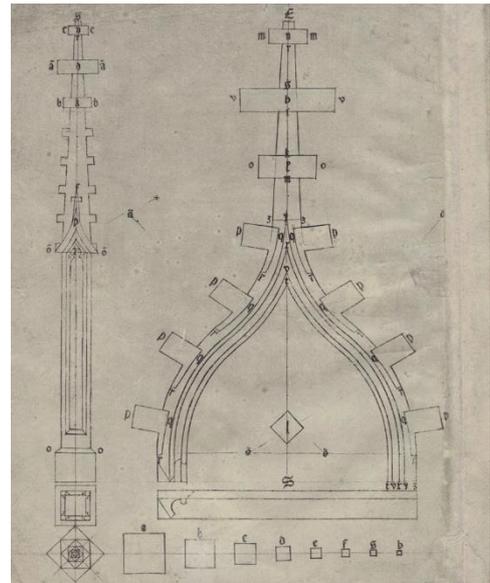


Fig. 6.1. Hans Schmuttermayer, *Das Fielenbüchlein*, Nuremberg, Georg Stuchs, 1489. Nuremberg, Germanisches Nationalmuseum. Photo: © Wikicommons.

Master E.S., Martin Schongauer, Daniel Hopfer (1470-1536), Israhel van Meckenem (c. 1445-1503), Heinrich Aldegrever (1502-1555/1561), Peter Flötner (1490-1546), Veit Stoss (1450-1533) and of course Albrecht Dürer: they are just a few names of early German engravers who had come from often long family traditions of goldsmiths, master masons or wood carvers.⁶⁶⁸ These goldsmith-engravers' workshops have since long been considered as the starting point of the engraved image in European print culture.⁶⁶⁹ By the late 1450's, stimulated by the introduction of the roller press and cheaper paper, gold- and silversmith tools (the burin and stylus) traditionally used for figurative and decorative patterns on metalwork were increasingly adopted by craftsmen to produce engraved images. Almost immediately, they recognized the potential of the printed image as a way of producing multiple pictures for distribution and sales. Most early goldsmith-engravers created printed representations of single (micro-)architectural objects produced by carpenters, stone masons, or goldsmiths: baldachins, tabernacles, crosiers, cups, censers, etc. These individual engravings are commonly categorized under the broad term 'ornament print'.⁶⁷⁰ This does not do much justice to the significance and function of these prints since they exceeded a mere aesthetic ornamental function. When ornament is described as purely decorative and its function reduced to embellishing or completing an object with an added layer of beauty, the prints discussed in the following chapter

⁶⁶⁷ On Roriczer and Schmuttermayer as printers, see Shelby 1977, pp. 31-34.

⁶⁶⁸ Goddard 1988.

⁶⁶⁹ Lehrs 1908-34, vol. 1, pp. 1-3; Landau & Parshall, 1994, pp. 7-8; Hunnisett 1998, pp. 9-13; Weekes 2007, pp. 25-29; Zelen 2013, pp. 25-31; Stijnman 2012, pp. 30-33, situates the beginning of engraving with the Master of the Playing Cards, c. 1435. He does remark that the hatchings made by early engravers are of a different nature than those seen in goldsmiths' engravings.

⁶⁷⁰ Berliner 1926; Warncke 1976; Byrne 1981; De Jong & De Groot 1988; Miller 1999.

cannot be properly analyzed.⁶⁷¹ Since these prints are either mimetic of an existing design or serve to inspire others, the term ‘design print’ is perhaps more suitable.⁶⁷² These prints were an essential instrument for the dissemination of both goldsmith and architectural designs. While models for ornament and architectural plans had previously circulated among workshops in the form of sketchbooks, loose workshop drawings and luxury presentation drawings, by the end of the fifteenth century, the early modern workshop stock was increasingly supplemented by prints.⁶⁷³ Prints served as patterns not only for goldsmiths but for a wide range of craftsmen and artists. The aim of this chapter is twofold: first, to examine the role of ‘goldsmith-engravers’ as intermediary figures in the transition of technical knowledge from architecture-related workshops to other types of workshops. Secondly, we will explore the field of late fifteenth-century Netherlandish design prints by taking into consideration their creative function and their reception in a European context.

6.1. The protagonists - Early engravers in the Low Countries and their architectural background: 1470-1510

Little is known about the early developments of printmaking in the Low Countries during the late 15th century, prior to Lucas van Leyden’s (1489/94-1533) entrance on the stage of Netherlandish printmaking around 1510.⁶⁷⁴ Many early engravers, such as Master W or Master FVB (active 1480-1500), are known only through initials or monograms by which they signed their prints. The earliest Netherlandish engraver who left a biographical trace is Alart Du Hameel (c. 1449-1506) from ‘s-Hertogenbosch.⁶⁷⁵ His career illustrates the thin boundaries between early modern professional groups. Du Hameel was working as a master mason and architectural designer on some of the most prestigious ecclesiastical building projects in the Low Countries and was part of a close network of traveling architects, such as members of the Keldermans family, Domien de Waghemakere and Lodewijk van Boghem. Between 1478 and 1494, during the heyday of the Gothic style in the Duchy of Brabant, he designed the south portal and the chapel of the celebrated Confraternity of Our Lady at St

⁶⁷¹ Oleg Grabar qualifies ornament in such manner, as carriers of beauty, which he understands as the main function of ornament. Grabar 1992. For a historiography of art historical and conceptual thinking about ornament, see Payne 2012, especially pp. 112-156.

⁶⁷² A similar argument was recently made by Allison Stielau who coined the term object-engraving to address the same semantic issue, Stielau 2014, p. 28.

⁶⁷³ Byrne 1981, pp. 17-19; On the use of model books in medieval workshops, see Scheller 1995.

⁶⁷⁴ Filedt-Kok 1985, p. 26; Jan van der Stock 1998; Van Grieken 2012; Dresden 2013; Horbatsch 2017; Borchert 2018.

⁶⁷⁵ Van Even 1870, pp. 40-43; Verreyt 1894; Lehrs 1894; Van Even 1895; Smits 1907; Gerlach 1970; Peeters 1985; De Jonge 2011; Bass 2015, pp. 20-25.

John's in 's-Hertogenbosch.⁶⁷⁶ As had become customary for the new type of architect, Du Hameel simultaneously supervised several projects outside his hometown.⁶⁷⁷ He was called to Antwerp on several occasions to offer advice on the construction of the church of Our-Lady (1494-95 and 1500). Subsequently he was appointed as *magister operis* at the Leuven church of St Peter (1494-1502). In 1502 he became a citizen of Antwerp and was buried in 's-Hertogenbosch in 1506.

Like many of his colleagues, Du Hameel's design portfolio exceeded purely architectural design and also involved designing micro-architecture such as reliquaries, monstrances and other goldsmith's works.⁶⁷⁸ As a designer of micro-architecture, Du Hameel may also have designed a sacrament house for the church of Our-Lady in Antwerp, which was to be executed by the sculptor Thomas Best between 1484 and 1487.⁶⁷⁹ In 1484, the Cologne goldsmith Hendrik de Borchgrave (1456–1508) was contracted to create a costly new monstrance following to the drawing of master Alart Du Hameel.⁶⁸⁰ Drawings such as those mentioned in the contract between de Borchgrave and Du Hameel constituted an exclusive dialogue between designer, executor and commissioner. However, Du Hameel was keen on finding a much wider audience for his inventions by translating them into print. It is not certain whether he cut the actual copperplate himself, or if he just delivered the drawings for the prints. Considering his artistic network, it is not unreasonable to assume that Du Hameel's plates were cut by local goldsmiths for whom the artist had prepared the drawings in great detail. Nevertheless, the architect represents the group of craftsmen who combined a career as architectural designer with that of printmaking.

Similarly fitting within this social pattern is the career of the anonymous printmaker Master W (in older literature described as Master W with the Key).⁶⁸¹ Although nothing certain is known about this early engraver, several clues indicate that he was probably active in the Low Countries. Since one of his prints depicts the coat of arms of Charles the Bold (1433-77), it is assumed he was a goldsmith active within the entourage of the Burgundian court.⁶⁸² Although attempts have been made to identify Master W as the Bruges goldsmith Willem van der Cruse, there is little more

⁶⁷⁶ On Brabantine Gothic, see Roggen & Withof 1944; Coomans 2003; De Jonge, Geleys & Hörsch 2009.

⁶⁷⁷ On the architects as traveling supervisors in the Low Countries, see Hurx 2014; Hurx 2018, pp. 213-39.

⁶⁷⁸ Kik 2014a, pp. 73-88.

⁶⁷⁹ Donnet 1924. Contrary to what Donnet claims, archival reference for this finding and the payment is not mentioned in the church accounts. This error is repeated through subsequent literature. If these payments were made, they are probably mentioned in private archives of the fraternity of the Holy Sacrament. Unfortunately, no access was gained to consult these documents. Du Hameel is only mentioned in an advisory role to master mason Domien de Waghmakere for the construction of the north tower. KAA, Kerkrekeningen X (1493-1494), fol. 36r-37r.

⁶⁸⁰ Verreyt, 1894, p. 10; Helmus 1990, pp. 473-81.

⁶⁸¹ Lehrs 1895; Lehrs 1908-34, vol. 7, pp. 25-101; Boerner 1927; Dresden 2013, pp. 122-23. In 2015 John Byck defended a PhD dissertation on the Master W with the Key at New York University. Despite repeated requests, I was unable to consult this PhD. thesis.

⁶⁸² Lehrs 1908-34, vol. 7, pp.72-73, no. 48; Hollstein 1947-2020, vol. 12, no. 48.

than the cross shaped house mark to confirm this tentative hypothesis.⁶⁸³ Two print series also point toward Burgundian patronage: one represents an almost encyclopedic typology of the Burgundian naval fleet, while a second series displays a Burgundian encampment with cavalry and infantry troops, probably during one of Charles the Bold's military campaigns to control Guelders.⁶⁸⁴ The majority of his output consists of designs for goldsmiths, architects, woodcarvers, cabinetmakers and painters. His prints reveal various applications of geometrical design, ranging from monstrances and chalices, to architectural elements.

A third 'architectural engraver' working in the Low Countries is the printmaker traditionally described as Master IAM of Zwolle (c. 1440-1504), after the initials and house mark with which he signs his prints.⁶⁸⁵ Thom J. De Vries and Berend Dubbe made some very convincing arguments that this engraver can be identified as the painter of Zwolle Johan van den Mijnnesten.⁶⁸⁶ In 1462 he was recorded in the city registers as a master painter. Between 1465 and 1504 he was paid regularly for modest tasks such as providing the polychromy or gilding of altarpieces and flags.⁶⁸⁷ The only panel painting named in the archives is a commission in 1467 for a panel with "*S. Erasmus*".⁶⁸⁸ Based on the sparse amount of information, it is possible that Van den Mijnnesten focused more on the design of his prints in which he might have found a profitable market. Albert Châtelet proposed the theory that he only provided the design drawings for the engravings, which would then be cut in the copperplate by local goldsmiths.⁶⁸⁹ This might have been his brother-in-law, since his sister Katharina was married to the goldsmith Johan Poelman.⁶⁹⁰ Van den Mijnnesten also had strong family ties with stone cutters and -traders. His family originated from the small city of Schlüttrorf in the county of Bentheim, on the border of the Holy Roman Empire and the Burgundian Low Countries, where a certain Roloff Van den Mynsten (most likely Johan's father) was a wealthy stone cutter active in the stone trade. In 1448 Roloff was paid for the delivery of 584,5 feet of Bentheimer sandstone to the city of Zwolle.⁶⁹¹ Johan's son, who was also named Jan (c. 1490/95-1552), continued the family trade in Bentheimer sandstone and delivered stone for Zwolle's fortifications.⁶⁹² His known body of 26 prints is mostly dedicated to

⁶⁸³ Sleeswyk 1994, pp. 1-14.

⁶⁸⁴ Lehrs 1908-34, vol. 7, pp. 55-69, nos. 25-41; Hollstein 1947-2020, vol. 12, nos. 25-41. Two of the ship-engravings also mention the Flemish words *baerdze* (L. 40) and *kraeck* (L. 41), which is another indication of the engraver's Netherlandish roots.

⁶⁸⁵ Lehrs 1908-34, vol. 7, pp. 169-73; De Vries 1948, pp. 31-38; Dubbe 1970; Berkenvelder 1974; De Vries 1985; Châtelet 1981, pp. 168-71; Filedt Kok 1990; Dresden 2013, pp. 86-7.

⁶⁸⁶ De Vries 1948; Dubbe 1970; De Vries 1985.

⁶⁸⁷ Dubbe 1970, pp. 57-58; De Vries 1985, pp. 225, 228.

⁶⁸⁸ De Vries 1985, p. 230.

⁶⁸⁹ Châtelet 1981, p. 168. Jan-Piet Filedt Kok suggests the goldsmith Johannes Ludolphi, who became a citizen of Zwolle in 1479, as possible engraver, due to the use of the monogram IA in some engravings. Filedt-Kok 1990, p. 346.

⁶⁹⁰ Berkenvelder 1974, pp. 38-9; De Vries 1985, p. 225.

⁶⁹¹ De Vries 1985, *Ibid.*

⁶⁹² De Vries 1985, p. 227.

sculptural designs and religious subjects – and unlike Du Hameel or Master W – contains only a few engravings which can be related to the architectural design practice.

6.2. Design prints: answering a workshop demand for models.

Not unlike the above-mentioned treatises of Schmuttermayer, Roriczer or Dürer, the makers of design prints such as Du Hameel, Master W and Van den Mijnnesten seem to have had a similar audience of lovers of the art of geometry in mind. Since etching and engraving is believed to have begun in the goldsmith's workshop, it only seems logical that these design prints were widely distributed among and aimed at fellow-goldsmiths. Due to the loss of and forging of sixteenth to eighteenth-century luxurious gold- and metal ware, it remains methodologically difficult to determine the relationship between model and object. Archival sources and the rare existence of original goldsmith model inventories, however, indicate that the creative process in Gothic goldsmith workshop during the fifteenth century strongly relied on the use of model drawings, which circulated between different workshops.⁶⁹³ These drawings not only acted as leeway for the artist in producing his work, but often had a communicative function between artist and patron. A recent survey by Allison Stielau on the relationship between design prints and the preserved Gothic and early Renaissance metalwork (chalices, goblets, censers, etc.), concluded that only few show a direct relationship to the printed example.⁶⁹⁴ Other than actual design drawings which are intended for a single commission or project, these goldsmith prints are to be considered as models to inspire or train other journeymen.



Fig. 6.2. Alart Du Hameel, *Design for a Monstrance*, ca. 1479-1495, Engraving, 111,3 x 15,3 cm. Vienna, Graphische Sammlung Albertina, inv. DG1928/528. Photo: © Albertina Wien.

⁶⁹³ Panofsky 1951; Tanner 1991; Tomasi 2018.

⁶⁹⁴ Stielau 2014, p.24.

Their intended audience is similar to the professional group of architectural designers to which the above-described treatises were addressed: goldsmiths, painters, cabinet makers, ornamental sculptors, stone masons, architects, carpenters, etc.

6.2.1. Technical information

The most interesting evidence of the way goldsmith-engravers disseminated not only their designs, but also the geometrical design technique, is the inclusion of geometrical ground plans in their prints. As Lorenz Lechner writes in his treatise to his son, the most important skill of any designer is how to construct an elevation (*Aufzug*) from a ground plan (*Grund*) as an answer to the issue of how to capture and represent a three-dimensional object on paper. At the same time when the manuals on these techniques were produced by Schmuttermayer or Roriczer, these prints served a remarkably similar role of communicating design techniques to a wide audience. In Alart Du Hameel's engraving of a *Monstrance*, the ground plan is printed at the bottom of the page (fig. 6.2).⁶⁹⁵ A second engraving of the architect-engraver, a design for a *Gothic Baldachin* (fig. 6.3), displays the geometric compressed horizontal section on the upper right corner, in which several layers are projected upon a single plane at the base.⁶⁹⁶ The prints have often been compared to contemporary engravings by Wenzel von Olmütz (active 1475-1500); in particular his design for a *Gothic Baldachin* (fig. 6.4).⁶⁹⁷ Von Olmütz' baldachin equally provides the viewer with a hexagonal section plan. In comparison, however, Du Hameel only represents a slice of the ground plan, which he clarifies with the addition of a fraction (1/6 and 1/8). The fraction works as a clue to the viewer that the geometrical diagram should be multiplied in order to achieve a basic plan after rotating it. This way the viewer has the minimal amount of information to reconstruct the full ground plan.⁶⁹⁸ This type of information was reserved for a group of designers or perhaps educated collectors with the right skillset to deduct the elevation from the ground plan. Similarly, Master W's engraving of a *Monstrance* (fig. 6.5) only provides a quarter of the full plan.⁶⁹⁹ That this information was not always understood by a wider audience is evident from the existence of many copies of such design prints in which the geometric ground plan is trimmed by later

⁶⁹⁵ Lehrs, 1908-34, vol. 7, p. 245, no. 9.

⁶⁹⁶ Lehrs, 1908-34, vol. 7, p. 247, no. 10.

⁶⁹⁷ Lehrs 1908-34, vol. 6, no. 86. Given that Wenzel von Olmütz was known to have copied from many contemporary German engravers such as Schongauer and Dürer, it is not unthinkable that also his gothic design prints may have derived from other engravers, perhaps even Master W, since Israel van Meckenem was also known to have copied and republished engravings by Master W. On Von Olmütz as a copyist see, Landau & Parshall 1994, pp. 54-55; Bartrum 1995, p. 20-21.

⁶⁹⁸ For a reconstruction of the ground plan, see De Jonge 2011a, p. 215; De Jonge 2014b, p. 9.

⁶⁹⁹ Lehrs 1908-34, vol. 7, p. 84, no. 55; Hollstein 1947-2020, vol. 12, p. 232, no. 55.

owners and collectors who were either unappreciative or ignorant of the technical relevance of the ground plan in relation to the elevation and execution of the intended object.⁷⁰⁰

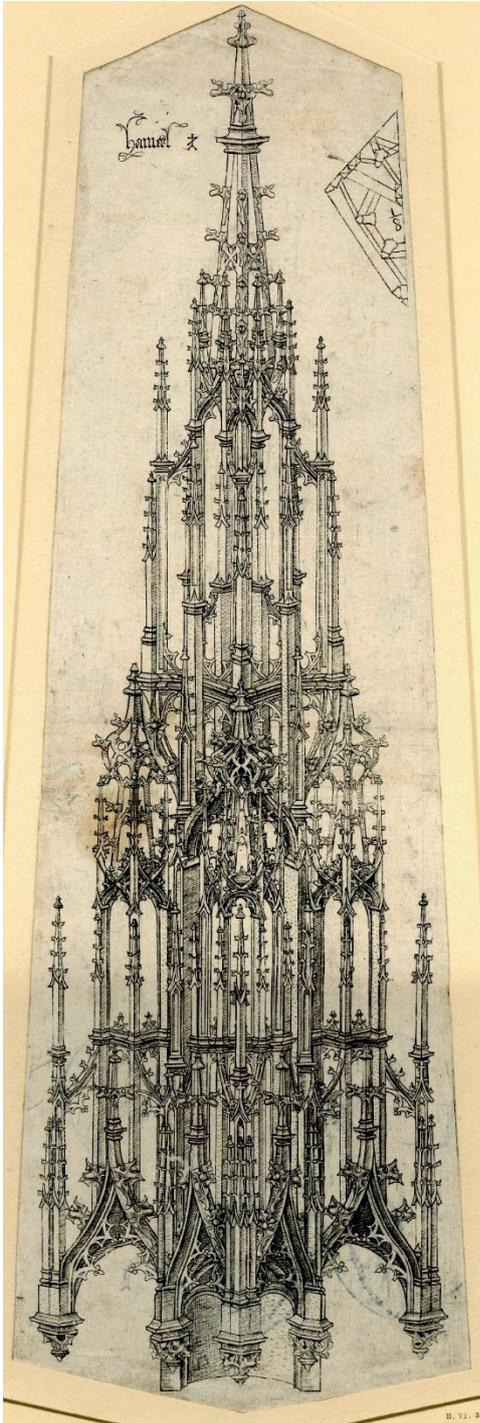


Fig. 6.3. Alart Du Hameel, *Design for a Baldachin*, ca. 1495-1505, Engraving, 38,7 x 12,7 cm. London, British Museum, inv. 01911.010. Photo: © British Museum.

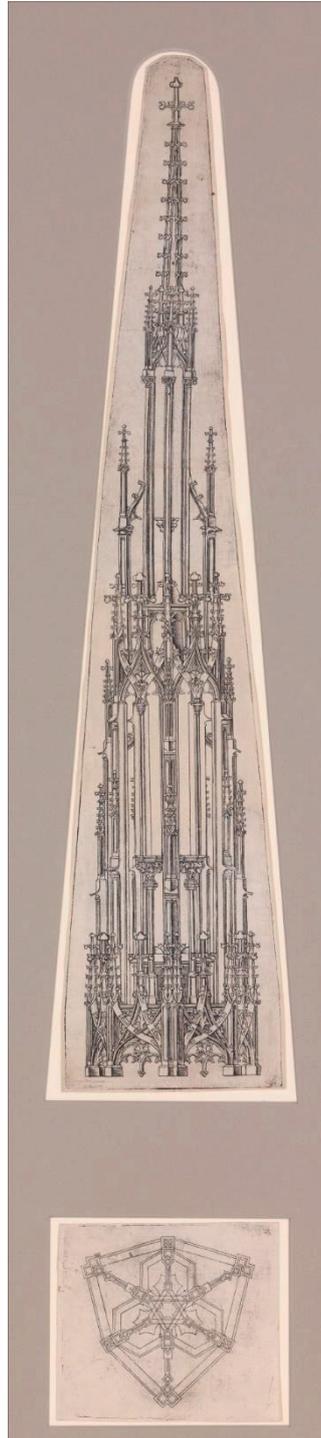


Fig. 6.4. Wenzel von Olmütz, *Design for a Baldachin*, ca. 1480-1500, Engraving, 101,5 x 38,2 cm. New York, The Metropolitan Museum of Art, inv. 49.97.607a, b. Photo: © Metropolitan Museum.

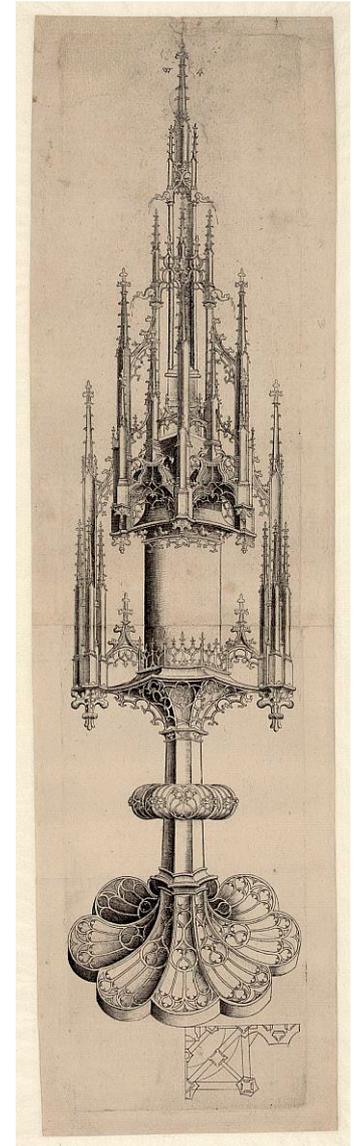


Fig. 6.5. Master W, *Design for a Monstrance*, ca. 1470-1495, Engraving, 28,4 x 14 cm. Vienna, Graphische Sammlung Albertina, inv. DG1928/388. Photo: © Albertina Wien.

⁷⁰⁰ It was not uncommon for print collectors to be 'creative' with such prints since one copy in the Brussel Royal Library of Master W's *Interior of a Gothic Church* (Lehrs no. 91) shows the print cut off at the three arches of the printed retable and one quarter at the bottom of the print, thus omitting the engraver's signature.

An interesting print in the context of dissemination of architectural building techniques is Master W's engraving of a *Flying Buttress* (fig. 6.6).⁷⁰¹ The piers, pinnacles and buttresses of the structure are all shown in an orthogonal elevation, with one exception: at the left side of the engraving, where the buttress seems to have been cut off, and the engraver chose to show a cross-section. This recalls the practice of stonecutter's templates. Template drawings of this kind were often used in Gothic architectural design practice and were referred to as *berderen* in building contracts. These cut-outs on a one-to-one scale, made from wood or paper, were instrumental in the communication between architects and stonecutters during the building process.⁷⁰² Templates like these can be seen in the background of an architect's portrait recently attributed to Jan Cornelisz. Vermeyen (fig. 7.9).⁷⁰³ Although the application for such a print has strictly been related to the profession of the stone mason and architect⁷⁰⁴, it can serve many purposes as these architectural elements were often included as framing devises in panel- and miniature painting.⁷⁰⁵ Also *metselrysnijders* (architectural wood carvers) would have benefitted from such printed models for the design of choir stalls or other micro-architecture.

Subtle technical design information is also provided by Master W, in his two prints depicting tracery patterns (Masswerk), applicable for rose

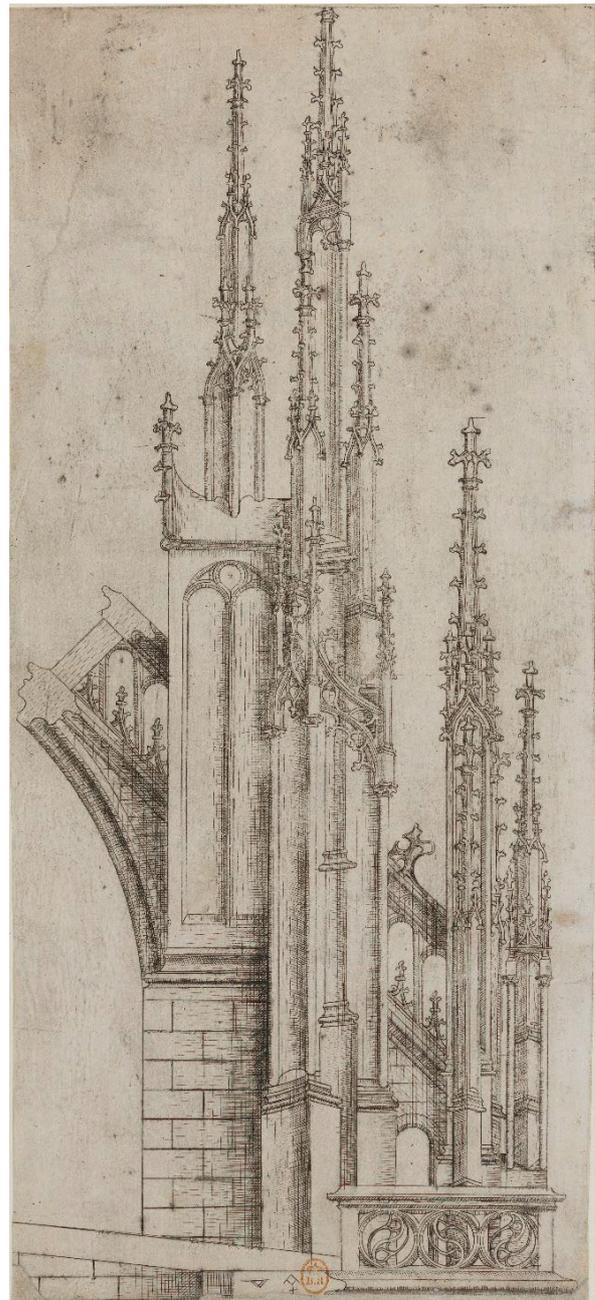


Fig. 6.6. Master W, *Flying Buttress*, ca. 1470-1495. Engraving, 40,3 x 18,3 cm. Paris, Bibliothèque nationale de France inv. Ec.N.752. Photo: © BnF.

⁷⁰¹ Lehrs, 1908-34, vol. 7, p. 98, no. 73; Hollstein 1947-2020, vol. 12, p. 249, nos. 73.

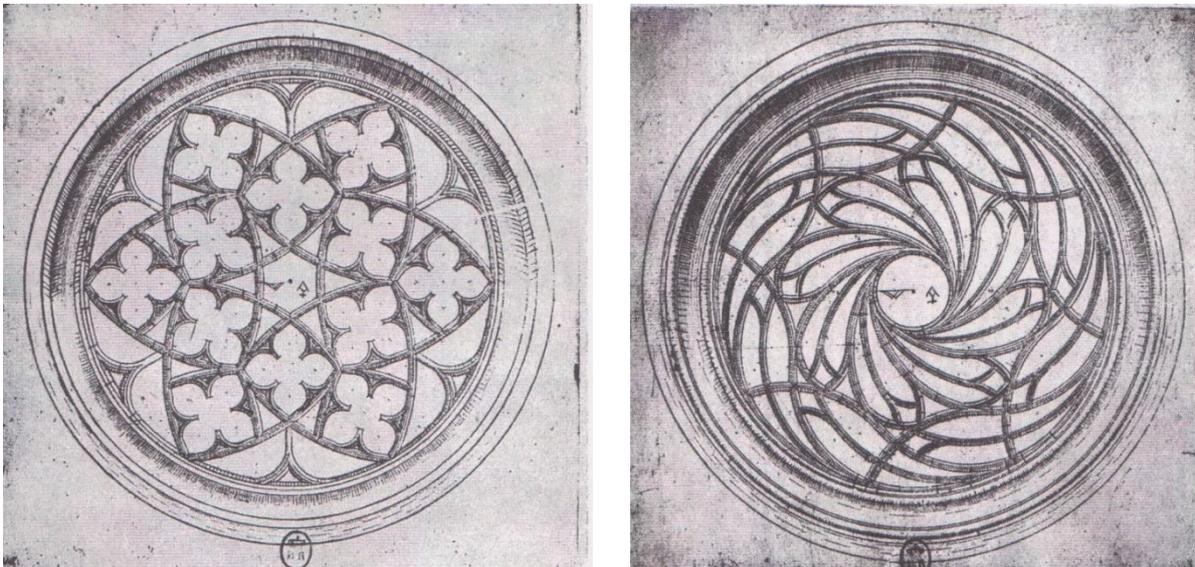
⁷⁰² Van Tyghem 1966; Shelby 1971; Hurx 2018, pp. 275-80.

⁷⁰³ Berlin, Staatliche Museen zu Berlin, Gemäldegalerie, inv. 629A. For the attribution to Vermeyen, see Guerreau 2012, pp. 986-87.

⁷⁰⁴ Boerner 1927, p. 40; Lehrs, 1908-34, vol. 7, p. 4.

⁷⁰⁵ Bruges 2018, pp. 110-11, no. 43.

windows (figs. 6.7 and 6.8).⁷⁰⁶ While the first tracery pattern is a rather classic hexagonal star-shaped form with quatrefoils, the second is a more elaborate swirling vortex of intertwining circles. They are playful variations on geometrical themes which, by the late fifteenth century, were the favoured showcase of technical ingenuity and geometrical mastery of architectural designers. The ability to show witty and complex variations and intertwining of basic geometrical shapes had become a creative source of visual intellectual pleasure.⁷⁰⁷ These two prints may have been part of a larger set, showing many more variations on rotating and intersecting circles, squares, and triangles. As a guiding tool to the experienced beholder the engraver included pointers of where to position the compass when reconstructing the design. Little dots are visible at the window's center and in the leaves of each individual quatrefoil are distinctly to be interpreted as compass points. Since it would have been rather easy to omit those echoes of geometrical design when the drawing was transferred to the copperplate, they must have been intentional.⁷⁰⁸



Figs. 6.7 and 6.8. Master W, *Design for a Rose window*, ca. 1470-1490. Engravings, Ø 14,5 cm, Paris, Bibliothèque Nationale. Photo: © Hollstein XII:71-72, p. 248.

⁷⁰⁶ Lehrs, 1908-34, vol. 7, pp. 97-98, nos. 71 & 72; Hollstein 1947-2020, vol. 12, p. 248, nos. 71 & 72. On idioms and typology of tracery patterns, see Binding 1998; Helten 2006.

⁷⁰⁷ Kavalier 2008; Kavalier 2012, pp. 55-68.

⁷⁰⁸ Even if the design had been made directly on the copperplate without a preparatory drawing, it would have been relatively easy for a professional engraver to burnish these construction points out before printing.

6.2.2. Marketing design: Baldachins and canopies

No Gothic architectural ornament is more recurrent in the prints of Netherlandish engravers than the baldachin. They perfectly illustrate the wide range of applications of these prints and the commercial instinct of their makers. The baldachin originated as a strictly architectural ornament in church portals in France and Germany around 1140, but by the 13th century it was applied in all other media.⁷⁰⁹ Quickly the baldachin became a favored playground for architects, sculptors, goldsmiths, carpenters, and stone masons to experiment with new forms and styles. Although micro-architectural structures such as baldachins basically relied on the same geometrical building principles as an architectural drawing for a cathedral spire, the design of baldachins, canopies and pinnacles lacked some of the time-consuming and - more importantly – financial restrictions that are inherent to larger building projects. By the late fifteenth- and early sixteenth century architectural designers had reached an unseen level of ornamental complexity in which the baldachin held a prominent role (fig. 6.10).⁷¹⁰ At the turn of the century entire church facades and porches in Normandy, such as the St Maclou in Rouen (c. 1490) and the south porch of Notre-Dame of Louviers (c. 1506) were designed to resemble huge baldachins (fig. 6.11). In the Low Countries baldachins were applied in every possible form of micro-architecture ranging from sacrament houses, gold reliquaries and pulpits to the complexly tracery carvings hovering over figurative scenes in carved retables, where they are often separately mentioned in contracts.⁷¹¹

Early Netherlandish engravers, with their professional and familial background as architectural designers, were aware



Fig. 6.10. Jan van Roome and Conrad Meit, *Tomb of Margaret of Austria*, 1516-32. Brou, St Nicolas-de-Tolentin. Photo: © author.



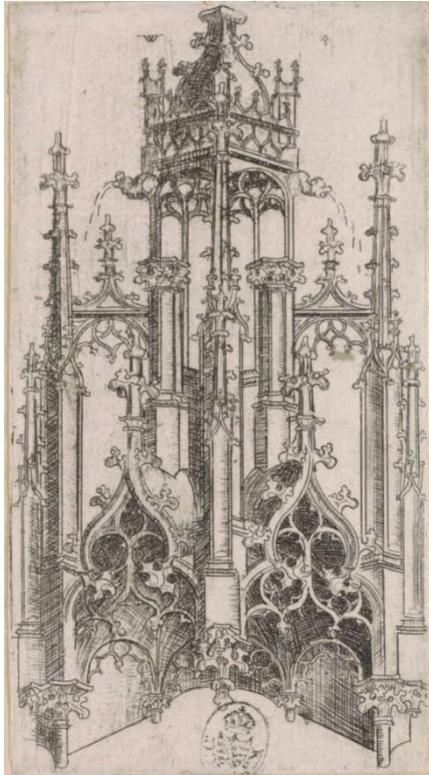
Fig. 6.11. *South Porch*, ca. 1506. Louviers, Notre-Dame. Photo: © author.

⁷⁰⁹ On the early development, function and meaning of the baldachin, see Klinkenberg 2010, pp. 205-60.

⁷¹⁰ Kavalier 2012, esp. pp. 165-96.

⁷¹¹ Crab 1977, pp. 323-25; Van Damme 1993, pp. 54-56; Kavalier 2017, p. 41.

of the high demand for models to imitate and improve upon. Three small prints of *modern* Gothic canopies by the Master W, can be considered as variations on a theme of a baldachin with an openwork-spire (figs. 6.12, 6.13, 6.14).⁷¹² A more elaborate version of this is seen on his engraving of a *Large Gothic Baldachin*, printed from two separate plates (fig. 6.15).⁷¹³ The latter can be compared



Figs. 6.12, 6.13, 6.14. Master W, *Designs for gothic baldachins*, ca. 1470-1490. Engravings, 13,1 x 7 cm; 13,3 x 7 cm; 19,4 x 7. Dresden, Kupferstichkabinett, inv. A 1871, A1872, A1869. Photo: © Kupferstichkabinett Dresden.

to Alart Du Hameel's similar Gothic baldachin (fig. 6.3). With these baldachin engravings the print designers show to be in touch with contemporary developments in Brabantine Gothic architecture, especially the building plans of openwork spire church towers such as the north tower of the Antwerp church of Our Lady (completed 1521) by Domien de Wagemakere and the plans for the Mechelen church of St Rumbold by Rombout II Keldermans (see Chapter 2.2.).⁷¹⁴ Of course, this should be no surprise since Du Hameel, as master mason, was part of the same network of architectural designers and was paid to counsel on the advancing north tower in Antwerp in 1494/5, and again in 1500 and 1506, together with Anthonis II Keldermans.⁷¹⁵ In fact, in his engraving of a *Gothic baldachin* Du Hameel

⁷¹² Lehrs, 1908-34, vol. 7, pp. 94-96, nos. 67, 68, 69.

⁷¹³ Lehrs, 1908-34, vol. 7, pp. 97, no. 70.

⁷¹⁴ On the development of openwork spires in European architecture, see Bork 2003.

⁷¹⁵ KAA, Kerkrekeningen X (1493-1494), fol. 36r-37r. Donnet 1924. Van Langendonck 1993, p. 116.

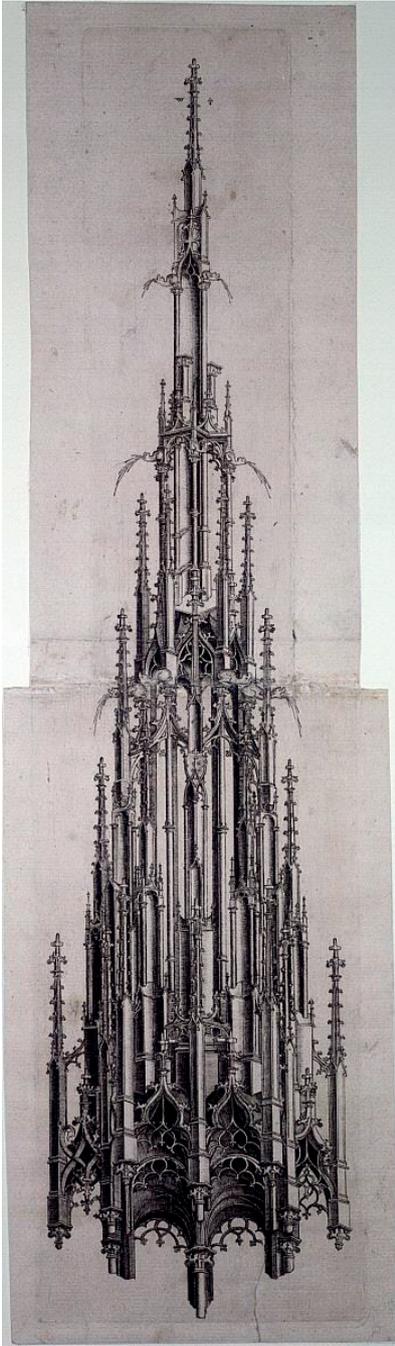


Fig. 6.15. Master W, *Design for a gothic baldachin*, ca. 1470-1495. Engraving, 45,7 x 11,5 cm. Vienna, Graphische Sammlung Albertina, inv. DG1928/387. Photo: © Albertina

seems to be referencing more than just a fashionable typology, but rather chooses a very specific and popular model in the Low Countries. The structure shows a striking resemblance to Matheus de Layens' sacrament house, designed and sculpted for the choir of the Leuven church of St Peter (fig. 6.16).⁷¹⁶ It was commissioned in 1450 by the Leuven Confraternity of Corpus Christi, which had its chapel in the north side of the choir.⁷¹⁷ Since Du Hameel was appointed as *magister operis* of the Leuven church between 1494 and 1502, the architect-engraver would have had ample time to study the tabernacle. With its hexagonal shape, the pyramid of flying buttresses, pinnacles, and gilded leaf work, the Leuven sacrament house marked a new stage in Brabantine Gothic design aesthetics, and it quickly became one of the best-known examples of what could be accomplished with micro-architecture. On several occasions the sacrament house served as the prime reference point for the design of Netherlandish Gothic spires in various media.⁷¹⁸ More than eighty years after its completion two separate sacrament houses were commissioned to be copied after the Leuven sacrament house. In 1536-38 the church masters of the church of St Gummarus' of Lier stipulated that the Leuven plan should be followed but updated with renewed ornaments in the "new manner", i.e., *modern Gothic*. Contemporary to the Lier-casus, the sculptor Gabriel van den Bruyne was to follow the Leuven plan for his new sacrament house in the Leuven church of St. James in 1537-38 and make it more fashionable with current developments in Gothic ornamentation (fig. 6.17).⁷¹⁹ Even the sacrament house in St Martin's church in Kortrijk, made by the Antwerp sculptor Henri Mauris in 1585-1586, still makes a clear

⁷¹⁶ Timmerman 2009, p. 185.

⁷¹⁷ Roggen & Withoff 1944, p. 165

⁷¹⁸ Joshua Bruyn recognized an early quotation of the sacrament house in its appearance in the famous *Fountain of Life*, by a follower of Jan van Eyck (Madrid, Museo del Prado, inv. P01151). This altarpiece was donated by Henry IV of Castile to the Hieronymite monastery of Nuestra Señora del Parral in Segovia between 1457 and 1459. The attribution and dating of the altarpiece, however, is still subject of a heated academic discussion on whether it is by a follower of Van Eyck, copied after an original of the Bruges master, or an early work by Van Eyck himself.

Therefore, any form of direct influence between sacrament house and altarpiece cannot be considered. Bruyn 1957; Pächt 1989, p. 133; Jones 2000; Bruges 2002, p. 237, no. 32; Fransen 2012; Steyaert 2015, p. 77.

⁷¹⁹ Maere 1946; Steppe 1952, no. 80; Timmerman 2009, p. 94, 324-27, appendix 13; Kavalier 2012, pp. 10-11.

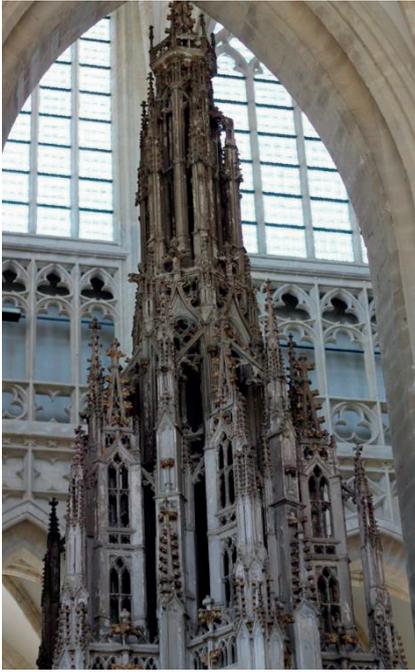


Fig. 6.16. Matheus de Layens, *Sacrament House*, 1457, Leuven, St Peters church. Photo: © Author.

reference to the Leuven prototype (fig. 6.18). As noticed by Achim Timmerman, Du Hameel's engraving faithfully reproduces all the characteristics of the original: the hexagonal ground plan and the openwork spire with the intertwining pyramid of flying buttresses.⁷²⁰ The print may have contributed to the popularity of the Leuven design which may help to explain the requests by the church wardens of Lier and Leuven's St James to follow the Leuven *ordonnatie* or *patroen*. The inclusion of the geometrical ground plan would have facilitated the transferability of the hexagonal ground plan design even when the ornamental style of the structure was updated, as requested in the commissions in the 1530s.

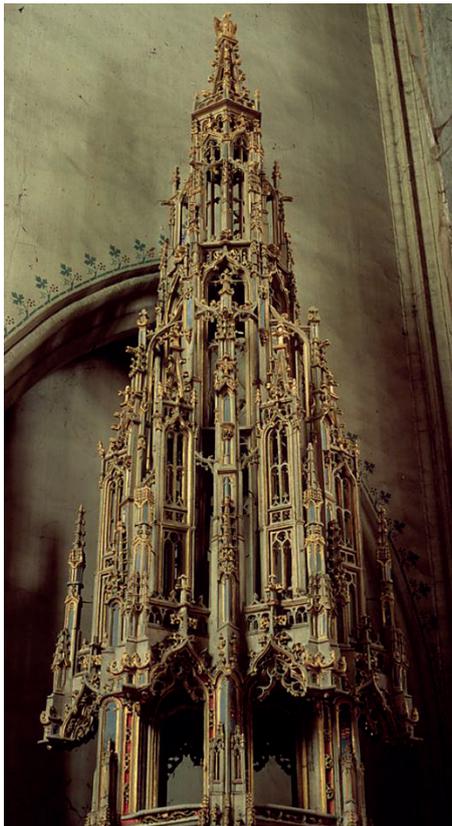


Fig. 6.17. Gabriel van den Bruyne, *Sacrament House*, 1536. Leuven, St James church. Photo: © E. M. Kavalier.

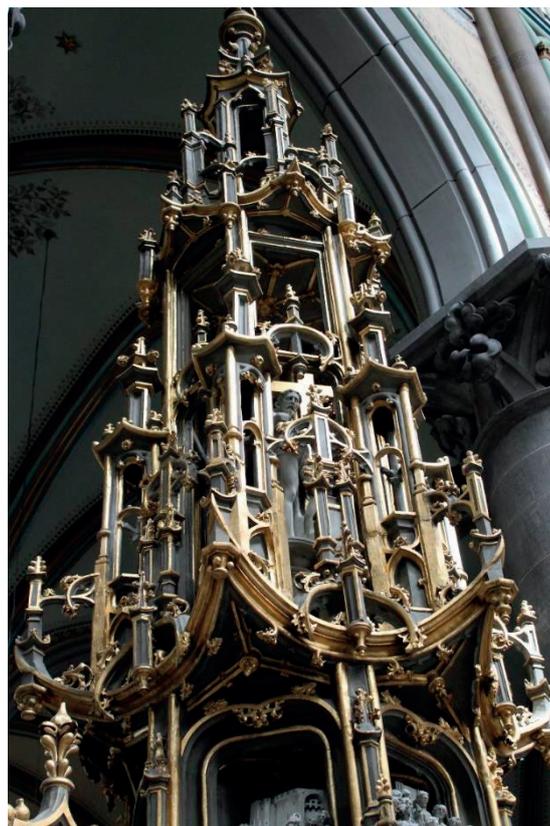


Fig. 6.18. Henri Mauris, *Sacrament House*, 1585-86. Kortrijk, St Martin's church. Photo: © Author.

⁷²⁰ Timmerman 2009, p. 338. The popularity of the Leuven model had a short neo-gothic revival, as the sacrament house of the Mechelen church of Onze-Lieve-Vrouw-over-de-Dijle of 1903 by Benoît van Uytvanck is copied after De Layen's sacrament house.

Between 1485 and 1487, Du Hameel may also have delivered a design for a sacrament house in the Antwerp church of Our Lady, executed by the sculptor Thomas Best.⁷²¹ Unfortunately, the tabernacle was destroyed during the 1566 Iconoclasm in Antwerp. Considering Du Hameel's fondness for the Leuven sacrament house, it is very likely that it also drew much inspiration from the Leuven model for the Antwerp commission. If this is true, the publication of the large baldachin engraving would have been a perfect tool for self-promotion (see Chapter 8) and a sign of a commercial instinct. This may also have been the case with Du Hameel's engraving for the *Monstrance*, which has been associated with a commission the artist received in 1484-85 to design a monstrance for the church of St. John in 's-Hertogenbosch, to be executed by the silversmith Hendrik de Borchgrave from Cologne.⁷²² It is still uncertain whether the silversmith was to work from a traditional design drawing or perhaps the engraving. The contract stipulates that de Borchgrave is to follow the design (*patroone*) of master Alart, which the latter was to complete with some statuette designs.⁷²³ Terms such as *ordonantie* and *patroone* are rather ambiguous, as they can either be interpreted as a conceptual design or as a physical drawing.⁷²⁴ Since the monstrance in the engraving shows no statues in the niches, the print may have served as the design to which the contract refers. In this case, Du Hameel was to deliver some additional drawings of apostles or saints to fill the voids in the print, perhaps not unlike his engraving for *The Apostle Peter standing on a Console* (fig. 6.19).⁷²⁵ By turning his own commission drawings into prints, the architect-engraver disseminated his own designs not only among colleague craftsmen but also to collectors and future patrons. It answered a demand for models and examples in a workshop-practice where it was common among architectural designers to copy or improve upon successful designs.⁷²⁶ The fame of Du Hameel's architectural design skills can perhaps best be illustrated by the fact that when the patrons of the chapel of the Holy Sacrament at the church of St. Gudula in Brussels commissioned the chapel's construction, they sent



Fig. 6.19. Alart Du Hameel, *St. Peter standing on a console*, 1480-1500. Engraving, 25,6 x 10,1 cm. Munich, Staatliche Graphische Sammlung. Photo: © Hollstein VI:17,3.

⁷²¹ See note 678.

⁷²² Verreyt 1894, p. 10; Lehrs 1894, pp. 23-24; Helmus 1990, pp. 476-79.

⁷²³ '(...) naden patroone, dat meester Alart die Meester vanden warck van sunte jans, dair op ontworpen heeft, ende noch voirt volmaken zal mette beelden'; Helmus 1990, p. 476.

⁷²⁴ Philipp 1989; Hurx 2018, p. 242.

⁷²⁵ Lehrs, 1908-34, vol. 7, p. 237, no. 3; Hollstein 1947-2020, vol. 6, 17.3. Peeters suggested that the statue might have been intended as a design for the south portico of the Leuven church of St. Peter, to which construction had begun in 1497, but was left unfinished in 1502 when Du Hameel took up residence in Antwerp. Peeters 1985, p. 40.

⁷²⁶ Hurx 2018, pp. 248-51.

for a drawing of the chapel of the Confraternity of Our Lady in 's-Hertogenbosch, to see whether some of its elements could be used".⁷²⁷

6.2.3. Nuts and boxes

When we compare the output of Netherlandish design printmakers to that of their German peers, such as such as Master E.S. or Wenzel van Olmütz, the share of prints related to the design for carved altarpieces or related wood carvings is rather high. This should come as no a surprise since the carved wooden altarpiece had become a major industry and export product in the Low Countries.⁷²⁸ In many cases the lavish and complicated architectural ornament of Netherlandish retables fills even more than half of the framing box (*caisse* or *kast*).⁷²⁹ To answer to the increasing demand of

production, by the middle of the fifteenth century, retable ateliers resorted to division of labour in three main specialties: carpenters and joiners made the *caisse* (to this group also belonged the *metselrijnsnijders* who carved the micro-architecture), the wood sculptors also described as *figuursnyders* or *beeldsnyders* were responsible for the figurative part, and lastly the figures and wings of the altarpiece were finished by the painters.⁷³⁰ The fact that the same architectural principles as those of building masters were applied by *metselrijnsnijders* working on carved altarpieces, is perhaps best illustrated by the career of Laurys Keldermans (c. 1482-1534), son to former building master of Mechelen Anthonis II Keldermans, who was listed in the Antwerp Liggeren in 1499 as *beeldsnydere*.⁷³¹ While he executed several commissions for

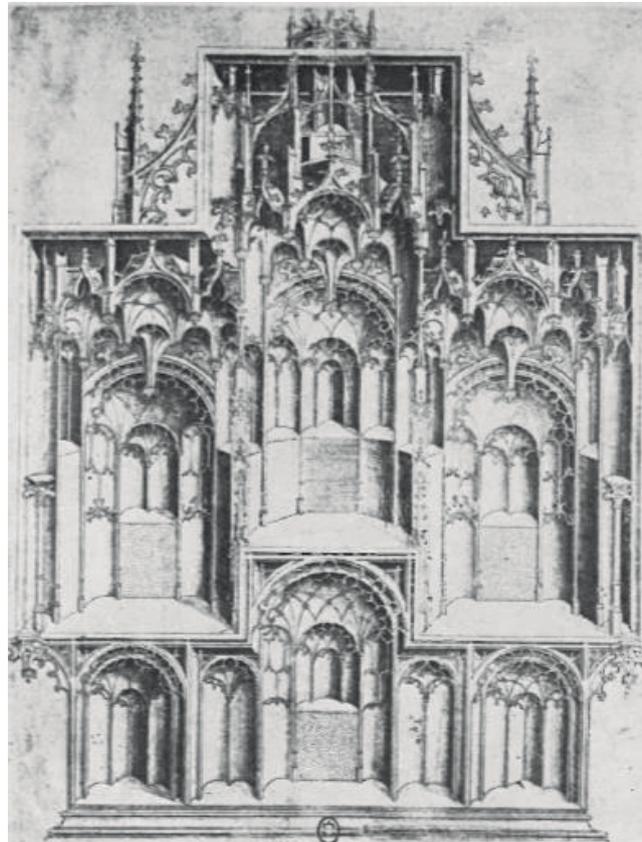


Fig. 6.20. Master W, *Gothic altar with eight niches*, 1470-1490. Engraving, 33,8 x 25,5 cm. Paris, Bibliothèque nationale de France. Photo: © Hollstein XII:238,61.

⁷²⁷ Peeters 1985, p. 396; Hurx 2018, p. 249.

⁷²⁸ The literature on Netherlandish carved altarpieces is extensive, the most recent studies are Crab 1977; Antwerp 1993b; Jacobs 1998; Van de Velde 2005; De Boodt & Schäfer 2007; Woods 2007; Kavalier 2017.

⁷²⁹ On the architectural ornament in carved altarpieces, see Jacobs 1998, pp. 115-45; Kavalier 2012, pp. 70-71.

⁷³⁰ Jacobs 1998, pp. 210-13.

⁷³¹ Rombouts & Van Lerius 1864-79, vol. 1, p. 54.

carved altarpieces, including two altarpieces for the Abbey of Averbode in 1511 and 1524,⁷³² he also assisted his uncle Rombout II Keldermans on several prestigious building projects, such as the palace of Henry III of Nassau in Brussels (1503), the church tower and fortifications of Hulst (1526/27), the Brussels King's House (1515/16) or the town hall in Ghent (1527).⁷³³ After the death of his uncle he replaced him as Mechelen's building master and continued to work on projects such as the Onze-Lieve-Vrouwe-over-de Dijle Church and the palace of the Great Council.⁷³⁴

The increasing proto-industrial production scale of carved altarpieces not only led to a stronger division of labour, but also resulted in a simplification and generalisation of models and visual typologies. Early Netherlandish engravers such as Du Hameel, but especially Van den Mijnnesten and Master W seemed to respond to this demand for new models by the craftsmen involved in the production of retables. Eight prints by the Master W can directly be related to the production of carved altarpieces and their architectural ornament.⁷³⁵ The most elaborate one of these is the *Gothic Altar with eight niches* (fig. 6.20).⁷³⁶ The empty case, with the omission of the narrative context or figures, would have benefitted joiners and carpenters and the sumptuously rich tracery and canopy pays tribute to the craftsmanship of the Netherlandish *metselrijnsnijders*.⁷³⁷ Although no existing *caisse* of Netherlandish altarpieces shows to be an exact copy of Master W's engraving, the general structure of doubling of the inverted T-shape, both in its lower *caisse* and in the main *caisse* had become one of the most frequently used typologies, primarily in Antwerp workshops.⁷³⁸ The *caisses* of the altarpieces in Bocholt, Bree-Opitter, Enghien, Oplinter (KMKG Brussels), Retie and Philadelphia (Museum of Art, fig. 6.21) share the same structure. These altarpieces carry the Antwerp quality mark and were produced between 1520 and 1540, possibly in the same joiner's workshop. Although the rigid rectangular shape of the top seen in the engraving has been updated to the more fashionable curved bell-shape profile, the basic lay-out is strikingly similar.⁷³⁹

⁷³² Lefèvre 1935; Jacobs 1998, pp. 150-51, 194-95.

⁷³³ Van Wylick-Westermann 1987, pp. 22-23; Hurx 2018, pp. 211-12, 242-45.

⁷³⁴ AKL, vol. 80, p. 5; De Jonge 2010b, pp. 61-63.

⁷³⁵ Lehrs, 1908-34, vol. 7, nos. 58, 59, 60, 61, 63, 64, 65 and 66.

⁷³⁶ Lehrs, 1908-34, vol. 7, p. 89, no. 61.

⁷³⁷ Woods 1990; Jacobs 1998, p. 224.

⁷³⁸ On the inverted T-shape, see Jacobs 1991.

⁷³⁹ The engraver used the bell-shaped frame ending in a smaller print which depicts a less elaborate altar-case with three sections. It predates the popularisation of this typology by at least twenty years, and the engraving may have contributed to the dissemination of the typology in Brabantine joiners' workshops. See Lehrs 1908-34, vol. 7, p. 89, no. 59.

It is not unthinkable that the engraving circulated in workshops in Antwerp, Mechelen or Brussels as inspiration to be improved upon. The anonymous engraver also published a more modest, inverted T-shape altarpiece *caisse*, which also shows a miniature piece of ecclesiastical Gothic interior (fig. 6.22).⁷⁴⁰ Such perspectival *metzelerie*, which is often included in Netherlandish altarpieces, helps us explain the purpose of other prints focussing only on this element, such as the *Gothic church Interior* and *Gothic Hall interior* (figs. 6.23 and 6.24).⁷⁴¹ With their slightly contorted perspective and architectural frames, these engravings clearly represent retable niches waiting for their sculptural groups to populate them.⁷⁴² In her study on early Netherlandish altarpiece production Lynn F. Jacobs explains how these workshops increasingly relied on repetition of models and reuse of existing designs through the use and dissemination of model books and drawings.⁷⁴³ This led to an increased standardization of figures and ornament. In their struggle to keep up with the mass production of carved altarpieces, affordable and reproducible designs such as those offered by Master W would have answered this continuous demand for workshop models.



Fig. 6.21. Antwerp workshop, *Altarpiece with scenes of the Passion*, ca. 1530. Philadelphia, Museum of Art, inv. 1945-25-117. Photo: © Museum of Art.

⁷⁴⁰ Lehrs, 1908-34, vol. 7, pp. 84-88, no. 58.

⁷⁴¹ Lehrs, 1908-34, vol. 7, pp. 91-92, 93-94, nos. 63 and 66. Interestingly in the context of the relationship between Antwerp carved altarpieces and design engravings, is the fact that the Oxford copy of the *Gothic hall interior*, bears the manuscript inscription “Anvers” in contemporary brown ink at the lower left.

⁷⁴² Filedt Kok 1989, p. 186.

⁷⁴³ Jacobs 1998, p.215-28.

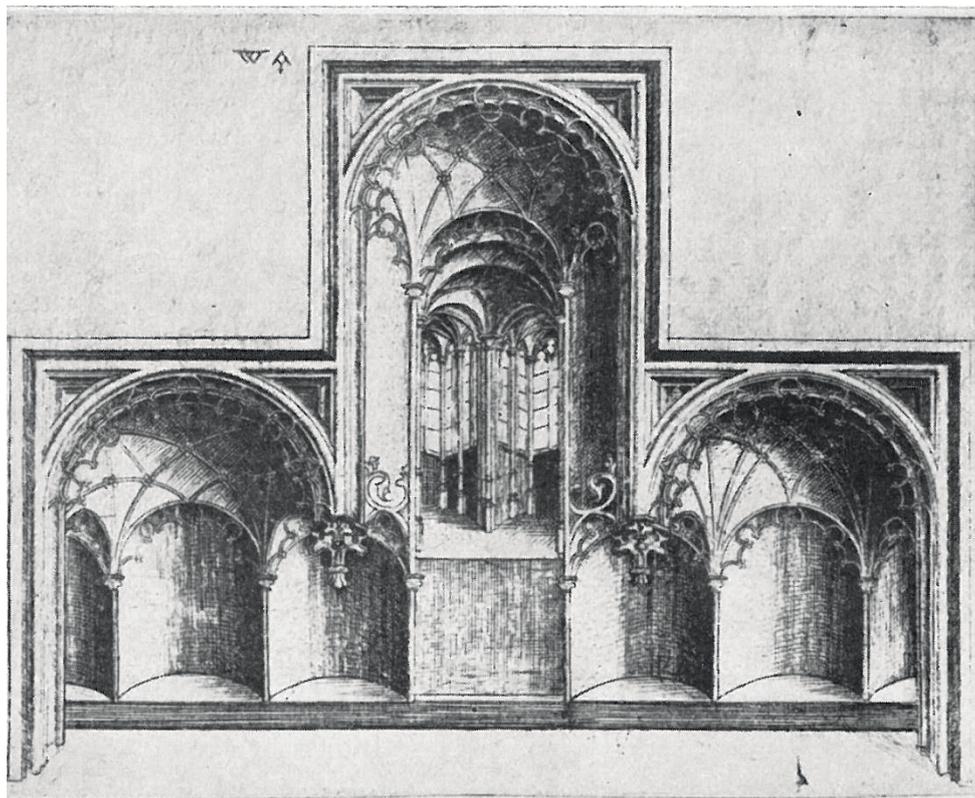


Fig. 6.22. Master W, *Gothic altar case*, 1470-1490. Engraving, 13,2 x 16,5 cm. Berlin, Staatliche Museen zu Berlin. Kupferstichkabinett. Photo: © Hollstein XII:235,58.

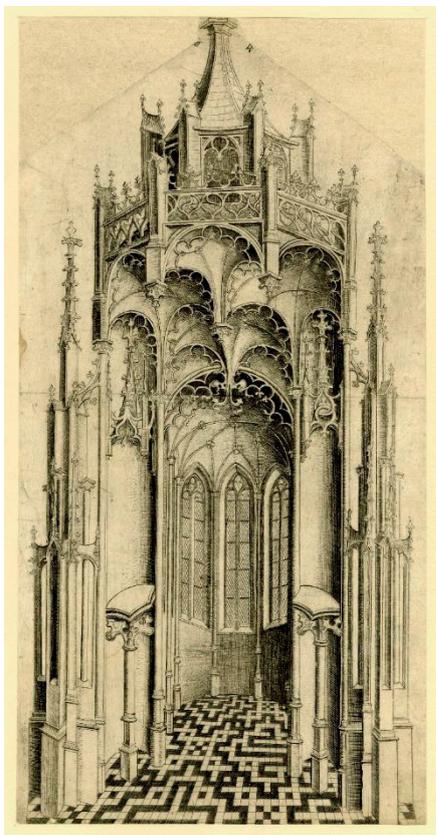


Fig. 6.23. Master W, *Gothic church interior*, 1470-1490. Engraving, 35,5 x 18,2 cm. London, The British Museum, inv. E,1.193. Photo: © British Museum



Fig. 6.24. Master W, *Gothic hall interior*, 1470-1490. Engraving, 16,4 x 13,3 cm. Amsterdam, Rijksmuseum, RP-P-1986-42. Photo: © Rijksmuseum.

Most of master IAM of Zwolle, or Jan van den Mijnnesten's commissions are related to the polychromies of carved altarpieces and we can assume that Van den Mijnnesten was a full-time *stoffeerder* or *beeldverver*. Although polychromy had always been a core task of painters, with the increase of production and demand for carved altarpieces during the second half of the fifteenth century, the polychromer had become a separate specialty.⁷⁴⁴ The profession is mentioned with increased frequency in the Antwerp *Liggeren* between 1490 and 1530.⁷⁴⁵ As a *stoffeerder* Van den Mijnnesten's professional network would have consisted of joiners, carpenters, and wood sculptors.

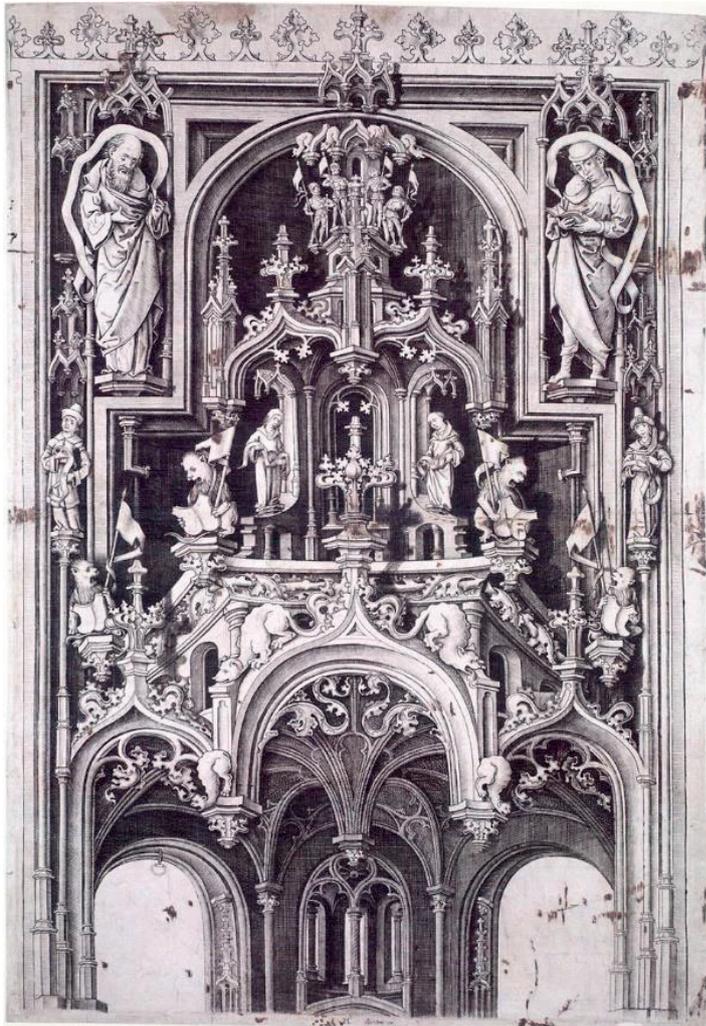


Fig. 6.25. Jan van den Mijnnesten, *Gothic Canopy*, 1470-1500. Engraving, 41,2 x 28,2 cm. Vienna, Graphische Sammlung Albertina, inv. DG1928/515. Photo: © Albertina Wien.

In 1479-80, Van den Mijnnesten was paid 15 Rhenish guilders for painting three statues made by the woodcarver Arnt van Kalkar (active 1460-1492).⁷⁴⁶ In 1484 the sculptor moved his thriving workshop from Kalkar to Zwolle.⁷⁴⁷ Given the recorded payments between Van den Mijnnesten and Arnt van Kalkar, as well as the sculptural nature of many of Van den Mijnnesten's engravings, it seems very likely that his prints primarily functioned as workshop models for woodcarvers and makers of carved retables such as Arnt van Kalkar.⁷⁴⁸ No print in the printmaker's known oeuvre illustrates this connection better than his engraved design for a *Gothic Canopy*, which represents the top center element of an inverted T-shaped carved altarpiece (fig. 6.25).⁷⁴⁹ When compared to the retable *caisses* or baldachins of Master

⁷⁴⁴ Jacobs 1998, p. 211-12.

⁷⁴⁵ Rombouts & Van Lerius, 1864-79, vol. 1, pp. 56-116.

⁷⁴⁶ De Vries 1985, p. 231.

⁷⁴⁷ Due to his move to Zwolle, he also mentioned in the literature as Arndt van Zwolle. On Arnt van Kalkar, see Schäfer 1991, pp. 21-25; Meurer 1996; Woods 2007, p. 88.

⁷⁴⁸ This was already suggested by Filedt Kok 1990, p.352. On Kalkar and the lower Rhine as centre for the production of carved retables, see Rommée 1997; Woods 2007, pp. 87-95.

⁷⁴⁹ Hollstein 1947-2020, vol. 12, no. 26.

W, this fragment comes to life with an unseen level of plasticity and dept. By employing a wide range of straight- and cross-hatchings to suggest shadows and darkness in the background, Van den Mijnnesten creates a staggering contrast with the figures and micro-architecture dominating the foreplan. The tonal rendering in this engraving comes close to the colouring with black and white for which Erasmus famously praised Dürer in his Eulogy (1528): “What is there that he cannot express in monochrome, that is black lines alone? – shadows, light, brightness, objects in the foreground and objects in the background”.⁷⁵⁰ One other significant difference to the retable prints of Master W and the design prints of Alart Du Hameel is the inclusion of sculpted figures in the niches and underneath the baldachins. This seems to suggest even more that this print may represent an existing altarpiece, rather than just a generic model.⁷⁵¹

Other narrative prints by Van den Mijnnesten can be associated with the production and design process of carved altarpieces of Arnt van Kalkar or similar Lower-Rhenish workshops. A print such as his depiction of *Christ in Gethsemane* – part of an incomplete set of large passions scenes - is enclosed by a *modern* Gothic frame which could either be wood or metal work (fig. 6.26).⁷⁵² Although these architectural framing devises were a tradition in Early Netherlandish painting since Rogier van der Weyden, the connection of Van den Mijnnesten with the retable workshops seems to point towards a more direct relationship.⁷⁵³ The size of the engravings in this print series (35 x 27,7 cm) also could point towards a more utilitarian practice as it corresponds to the size of many individual scenes in altarpieces. The relative depth of the scene reminds us of the perspectival solutions and foreshortenings seen in the figure groups of carved altarpieces. Another print from the same series, depicting the *The Last Supper*, is one of few concrete examples of an application of a print by Van den Mijnnesten in another medium (fig. 6.27).⁷⁵⁴ The engraving was copied in a small devotional silver altarpiece made in Salzburg by the goldsmith Master Pertoldus (Berthold Schauer?), dated 1494.⁷⁵⁵ This is an indication of the dissemination of these prints from Zwolle to other workshops outside the regional confines.⁷⁵⁶

⁷⁵⁰ Ashcroft 2017, pp. 858-60

⁷⁵¹ On the other hand, none of the figures seem to bear a clear iconography. The two figures on the upper left and right corners may be identified as prophets or evangelists, yet they lack any form of identifiable attribute. The same applies to the four smaller figurines. All the banderols have remained blank, and so did the flags and escutcheons which are held by the lions. An enigmatic detail is the bearded figure on the left corner niche who seems to be reading an imaginary book as if mimicking his partner in the right corner.

⁷⁵² Hollstein 1947-2020, vol. 12, no. 3.

⁷⁵³ On this tradition in early Netherlandish painting, see Birkmeyer 1961.

⁷⁵⁴ Hollstein 1947-2020, vol. 12, no. 2.

⁷⁵⁵ New York, Metropolitan Museum of Art, Cloisters Collection, inv. 69.226; Molsdorf 1908, p. 11; Filedt Kok 1990, p. 352; Zelen 2013, pp. 25-29.

⁷⁵⁶ This point is also illustrated using Jan van den Mijnnesten's *Centaur Battle* (L.23), in the French illuminated manuscript *The Hours of Charles d'Angoulême*, produced in the early 1480s. This manuscript also made use of other prints by Master E.S., Master FVB and Van Meckenem. Matthews 1986, pp. 4-18; Filedt Kok 1990, p. 352.



Fig. 6.26. Jan van den Mijnesten, *Christ in Gethsemane*, 1470-1500. Engraving, 35 x 27,8 cm. Amsterdam, Rijksmuseum, inv. RP-P-1980-111. Photo: © Rijksmuseum.



Fig. 6.27. Jan van den Mijnesten, *Christ in Gethsemane*, 1470-1500. Engraving, 31,5 x 26,4 cm. Dresden, Kupferstichkabinett, inv. A1880. Photo: © Kupferstichkabinett Dresden.

Master W's two designs for prayer nuts, similarly, illustrate how the engraver addressed the specific needs for the Netherlandish market situation (fig. 6.28).⁷⁵⁷ Although these prints are often identified as mantle clasp designs, intended for a goldsmith workshop, they may reflect more closely the micro-carving which can be found inside prayer nuts or prayer apples. By the late fifteenth century, these small boxwood objects of intricate luxury and devotion had become a fashionable object among members of the Habsburg court and urban mercantile middle-class.⁷⁵⁸ The production of these showcases of microscopic woodcarving was situated in the Northern Netherlands, more specifically in the county of Holland, with the Delft workshop of Adam Dirksz. as one of the best-known places of production.⁷⁵⁹ With their formal repertoire of tiny micro-architectural structures, these woodcarvers are technically positioned in between goldsmiths working on ecclesiastical treasures and the fifteenth-century sculptural traditions of carved altarpieces. Although application of the engravings by Master W for mantle clasps may have been possible, the intricate and complex intertwining of the Gothic and organic tracery would have been more feasible when executed with a small cutting tool in boxwood. The diameter of the print (12 cm) would make it possible for a woodcarver to use the engraving as

⁷⁵⁷ Lehrs 1908-34, vol. 7, p. 88; nos. 50-51.

⁷⁵⁸ Reesing 2017.

⁷⁵⁹ Leeuwenberg 1968; Scholten 2017, pp. 24-33; Reesing 2017, p. 247.

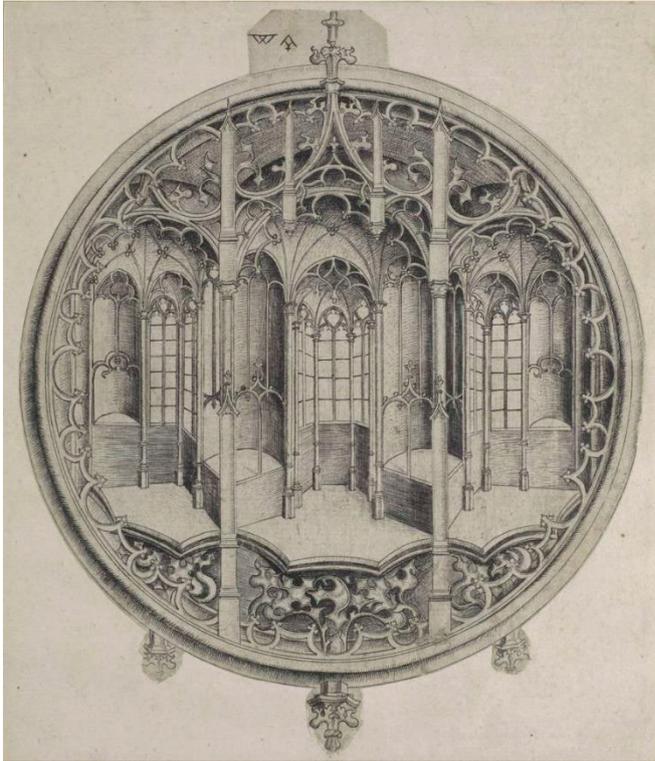


Fig. 6.28. Master W, *Design for prayer nut interior or mantle clasp*, 1470-1490. Engraving, 15 cm. Dresden, Kupferstichkabinett, inv. 1926-330. Photo: © Kupferstichkabinett Dresden.

workshop template for the diminutive individual compartments out of which these carved dollhouses are composed.

6.2.4. *Treasure chests and skulls*

Since they were first studied in the late 19th century goldsmith workshops were always considered as the prime audience for most of the Netherlandish design prints with representations of chalices, monstrances, luxurious drinking vessels or ecclesiastical crosiers.⁷⁶⁰ The best idea of these design prints' utilitarian function in goldsmith's workshops can be obtained from the inventory of the so-called *Basler Goldschmiederisse*. This collection was acquired in 1578 by the Basel collector and

jurist Basilius Amerbach (1533-1591) in 1578 and consists of the entire stock of 773 workshop drawings and prints used as models by the Basel goldsmith Jörg Schweiger the Elder (c. 1470–1533) and his son, (d. 1574).⁷⁶¹ The collection's inventory provides a unique insight into the portfolio of a goldsmith's workshop and includes many design prints of German and Swiss goldsmith-engravers, such as Urs Graf (1485-1528), Martin Schongauer, Jörg Syrlin the Younger (c. 1455-1521), and Israel van Meckenem. Interestingly, the collection also includes one of Master W's engraved representations of the wooden *caisse* of a carved altarpiece.⁷⁶²

⁷⁶⁰ Lehrs 1895; Boerner 1927; Lehrs 1908-1934, vol. 7, p. 4.

⁷⁶¹ Tanner 1991, p. 9.

⁷⁶² Lehrs 1908-34, vol. 7, p. 88; no. 59; Tanner 1991, p. 89, no. 64.



Fig. 6.29. Jan Gossart, *Adoration of the Magi* (details), 1510-15. Oil on panel, 177,2 x 161,8 cm. London, The National Gallery, inv. NG 2790. Photo: © National Gallery.

Even though these prints are often made by goldsmith for their colleagues, these engravers reached a much wider audience than just this narrow section of the print market. Their Gothic micro-architecture might equally inspire architectural designers in other media. Just recently one Master W's designs for a metal mantle-clasp was identified by Constanza Beltrami as the printed source for the morse on the cope worn by St Donatian in Gerard David's *Canon Bernardijn Salviati and three saints* in the National Gallery in London, thus formally confirming the use of design prints as models for craftsmen other than goldsmiths⁷⁶³ In extension of this, printed designs for chalices, cups or monstrances were probably a very welcome source in the painter's workshop. Especially with the increasing demand for Adoration scenes on the booming Antwerp art market (cf. chapter 5), the availability of printed models for lavish goblets and reliquaries would have supplied painter's workshops with new models. While these precious cups or monstrances had always been a standard item to represent the three Magi's gifts, by the dawn of the sixteenth century, however, these 'treasure chests' (Matthew 2:11) had become magnificent feats of metalwork in the oeuvres of Jan de Beer, Joos Van Cleve, Jacob Cornelisz. Van Oostanen or Jan Gossart. The latter's *Adoration of the Magi*, painted in 1510-15 for the chapel of Our-Lady in the church of St. Adrian's Abbey of Geraardsbergen, is perhaps the best showcase of what early-sixteenth century Netherlandish goldsmiths could achieve (fig. 6.29).⁷⁶⁴ While the goblet presented by the kneeling Caspar is still rather modest, the golden vessels held by Melchior and Balthasar are true masterpieces of metal work. With relative ease, Melchior presents a vessel which can only be described as a tour de force of micro-architecture and is a reminder of Master W's Gothic monstrances (fig. 6.5), be it in a much more exuberant version. Similarly, an echo of Master W's Large Crozier (fig. 6.30) is seen in Caspar's sceptre in the foreground, which

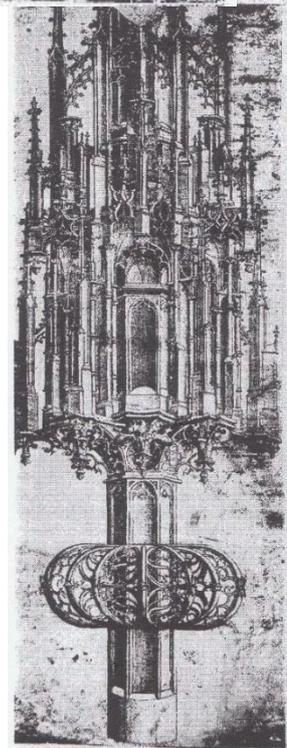
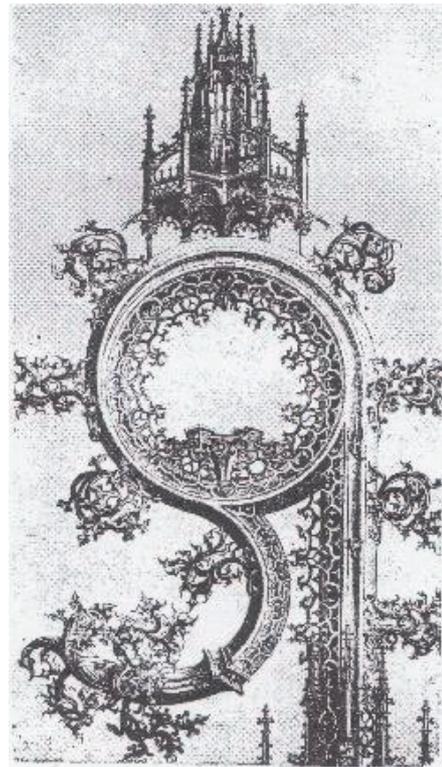


Fig. 6.30. Master W, *Design for large gothic crozier*, 1470-90. Engraving, 67,7 x 19,2 cm. Oxford, Ashmolean Museum, inv. WA1863.2923. Photo: © Hollstein XII:49.

⁷⁶³ Beltrami 2020.

⁷⁶⁴ London, National Gallery, inv. NG 2790.

incorporates putti and a figure of Moses in the fashionably Gothic niches of its micro-architecture. Gossart's reliance on prints for compositions has been indicated in multiple works; this Adoration too borrows motives from Schongauer and Dürer.⁷⁶⁵ Gossart's familiarity with Master W's prints was recently also suggested by Maryan Ainsworth who noticed an influence of Master W's *The Large Virgin and Child* in the elaborate *modern* Gothic canopies displayed in Gossart's *Malvagna Triptych*.⁷⁶⁶ It is in this context important to be reminded of the fact that Gossart's wife, Margriet Smolders, came from a family of retable carvers and that Jan's brother Nicasius was an architect and engineer.⁷⁶⁷ Thanks to his family background of craftsmen in architectural design techniques, Gossart showed a remarkable interest and consciousness of architectural developments and representation. His depictions of goldsmith's metal ware are perhaps only matched by Martin Schongauer who in his popular *Death of the Virgin* engraving showed a cunning eye for detail in the lavishly Gothic candle stick on the foreground. The close ties between Gossart's workshop and Gerard David between 1509 and 1515 also strengthens the suggestion that Gossart relied on similar printed inspiration as his renowned Bruges colleague for his painted luxury items.⁷⁶⁸

Another print of master W from which painters may have drawn inspiration are the two engravings of *Skulls in a niche with Gothic tracery* (figs. 6.31 and 6.32).⁷⁶⁹ The five skulls in the two prints almost show a training exercise in anatomic representation as each skull is shown in the three main representation methods of portraiture: frontal, three-quarters, and profile. A similar composition of a skull in a niche appears on one of the exterior panels of Gossart's *Carondelet Diptych* (fig. 6.33).⁷⁷⁰ The

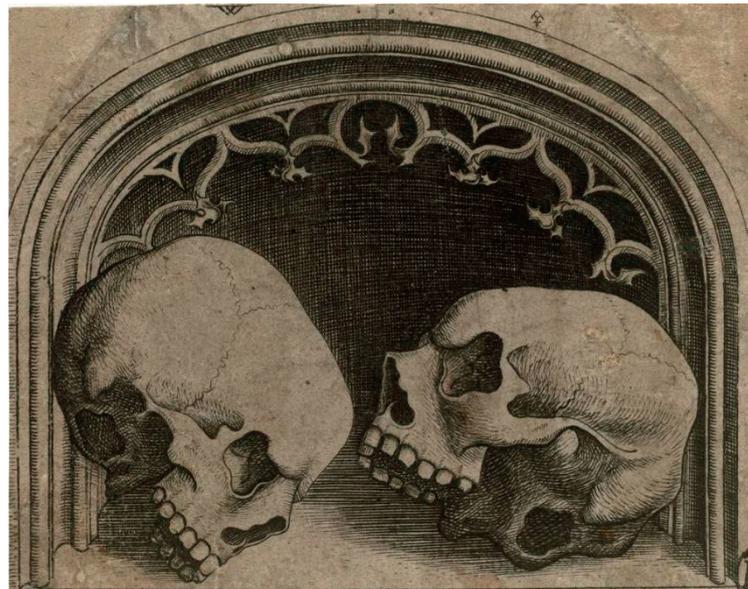


Fig. 6.31. Master W, *Two skulls in a niche with gothic tracery*, 1470-1490. Engraving, 7,9 x 10 cm. Dresden, Kupferstichkabinett, inv. 1926-329. Photo: © Kupferstichkabinett Dresden.

⁷⁶⁵ New York 2010, p. 145, no. 8. Gossart's interest in goldsmith's work is also attested by the drawing he made of *A Reliquary*. New York, The Morgan Library and Museum, inv. 127b. New York 2010, pp. 400-401, no. 110.

⁷⁶⁶ New York 2010, p. 128.

⁷⁶⁷ Duverger 1968; Ainsworth 2010, p. 14.

⁷⁶⁸ On the collaboration between Gerard David and Gossart, see Ainsworth 2010, pp. 13-15; Ainsworth 2017.

⁷⁶⁹ Lehrs 1908-34, vol. 7, p. 88, nos. 69-70.

⁷⁷⁰ Paris, Musée du Louvre, inv. 1443.

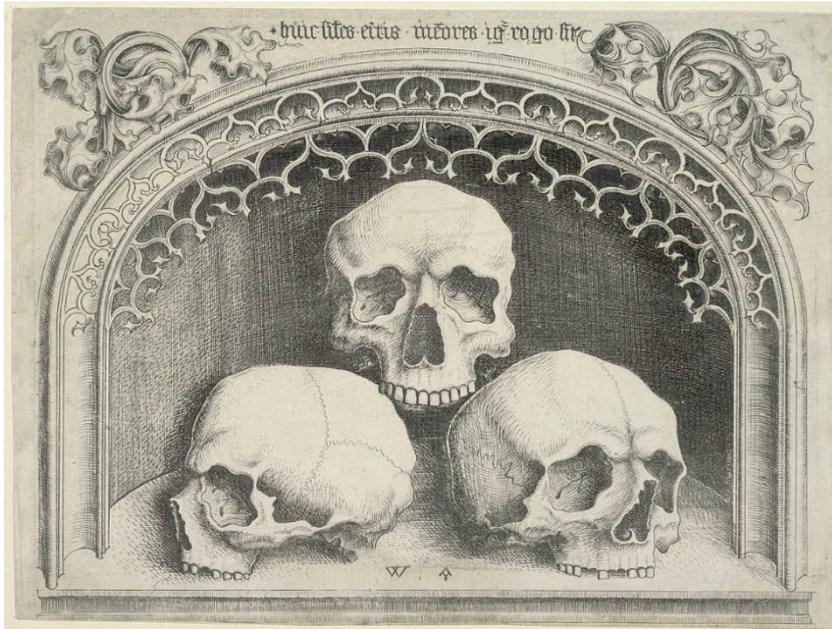


Fig. 6.32. Master W, *Three skulls in a niche with gothic tracery*, 1470-1490. Engraving, 13,2 x 17,5 cm. Vienna, Graphische Sammlung Albertina, inv. DG1928/386. Photo: © Albertina Wien.

composition as seen from below and the omission of the underjaw shows resemblance to the right skull of Master W's engraving of *Two skulls in a Niche*. Of course, skulls in niches had become a recurrent theme from the 1480s onward on the exteriors of Early Netherlandish diptychs and triptychs.⁷⁷¹ The popularity of the subject matter, however, is telling for the keen eye Master W had for

market opportunities. Although the surrounding case seems to point to a prime audience of retable makers and wood sculptors, the fact that those skulls are shown from three different angles makes it a three-dimensional study sheet for painters; not only for *Memento Mori* or the depiction of Adam's skull on Golgotha, but for portraiture anatomy in general.⁷⁷²



Fig. 6.31. Jan Gossart, *The Carondelet Diptych* (outer panels), 1517. Oil on panel, 52,5 x 36,8 cm. Paris, Musée du Louvre, inv. 1442 and 1443. Photo: © Musée du Louvre.

⁷⁷¹ Other examples of diptychs with skulls as *Memento Mori* are, for example: Hans Memling, *Diptych with Saints Veronica and John the Baptist*, 1480-83, Munich, Alte Pinakothek, Bayrische Staatsgemäldegalerie, inv. 652; Jan Provoost, *Diptych of a Franciscan*, 1522, Bruges, Sint-Janshospitaal, inv. OSJ.191.1.

⁷⁷² The widespread dissemination of the print is perhaps also seen by the fact that a late fifteenth-century edition of Olivier de la Marche's *Le Chevalier délibéré* is illustrated with a woodcut which is derived from Master W's engraving of three skulls. De Wilde 2018, p. 231, figs 197 and 198.

6.3. Design prints as collectable

Whatever the utilitarian intent and ultimate workshop purpose of these design engravings may have been, their survival is often thanks to a different context of aesthetic appreciation and collecting. There may have been a dual function to these prints. Although to the modern beholder the coexistence of the aesthetic with a functional workshop practice might seem like an odd contradiction in terms. Many of the prints, however, show such a high amount of visual detail, not required for any technical purpose, which strongly suggests that they were also produced as an independent aesthetic object. Master WA's engraving of a *Foliage Ornament* (fig. 3.34) is a good example. From a practical point of view the design of curling foliage may well have served various decorative purposes, such as the decorative frames of carved altarpieces or a sculpted doorpost (fig. 6.35). However, the flamboyance and visual flair displayed by the curling, twisting and meandering thistle leaves, set against the background of a niche, dimly lit from the right is not merely the result of a hesitant goldsmith experimenting with the possibilities of engraving but rather that of a self-conscious artist boasting his skills in creating dept, light, shade, and dynamic perspective through the means of parallel hatching and cross-hatching. This print was not merely designed as an instruction for goldsmiths, woodcarvers and stone masons alike, but was also a masterclass in the graphic possibilities of the new medium.⁷⁷³ Du Hameel virtually seems to have been in dialogue with Master W, as he designed a very similar print of a horizontal thistle leaf as an extravaganza with overlapping twists and curls (fig. 6.36).⁷⁷⁴ While slightly more artificial than Master W's vertical counterpart, Du Hameel's engraving is a chef-d'oeuvre in creating the illusion of light and shade



Fig. 6.34. Master W, *Foliage Ornament*, 1470-1490. Engraving, 27,3 x 8,6 cm. New York, Metropolitan Museum of Art, inv. 29.16.1. Photo: © Metropolitan Museum.

⁷⁷³ A similar conclusion in the print is reached in Bruges 2018.

⁷⁷⁴ Berliner 1926; p. 3; Lehrs 1908-34, vol. 7, pp. 247-8, no. 11.



Fig. 6.35. Juan Guas, *Foliate Ornament in door post*, 1477-1520. Toledo, San Juan de los Reyes. Photo: © author.

through use of dense cross-hatching and straight hatchings. The engraving has been associated with the very comparable thistle ornament used to embellish the garment of Balthasar in Jheronimus Bosch' *Adoration of the Magi* (Madrid, Museo del Prado), and it may very well exist as an individual object of aesthetic appreciation.⁷⁷⁵ Although these engravings may inspire other craftsmen, some of them seem to have been created primarily as a calling card, allowing the artists to demonstrate their capability to master complex perspectival objects by an articulate variation of hatchings. Many of the Master W's designs vigorously oscillate between practical models and objects of visual art and must have been collectables not long after they rolled off the press.

Although there are no surviving inventories of sixteenth-century Netherlandish print collections, there are some hints of these prints being collected from a very early stage.⁷⁷⁶ One of the earliest tangible print collections is that of Ferdinand Columbus (1488-1539).⁷⁷⁷ As a diplomat for the Spanish Royal Court and Habsburg Emperors this illegitimate second son of the famous explorer had the opportunity to enrich his growing book and print collection purchasing them all over Europe during his missions. Although the physical print collection has now completely vanished, an impression of the collection's wealth and

diversity can still be obtained thanks to an unusually descriptive inventory of the 3204 prints. The print collection also included some prints by Master W.⁷⁷⁸ Ferdinand also acquired six engravings signed by Master IAM (Van den Mijneste), including the very sculptural *Allegory on the Transience of Life*, a *Memento Mori* with skulls and skeletons decaying a stone tomb.⁷⁷⁹

Equally valuable for the understanding of Renaissance collecting and the taste for design prints, are the print albums of Ferdinand, Archduke of Tyrol (1529-1595), assembled as a part of his *Kunstammer* in Schloss Ambrass near Innsbruck, now mostly kept in the Kunsthistorisches Museum and Albertina in Vienna.⁷⁸⁰ One of these albums consists of design prints of goblets, vessels and vases. Although most

⁷⁷⁵ For the use of Du Hameel's print by Bosch, see Koldeweij 2002, p. 45; Bartsch 1991, p. 248, no. 11.

⁷⁷⁶ On early modern print collections also see Bubenik 2013, pp. 41-63.

⁷⁷⁷ McDonald 2004; McDonald 2009.

⁷⁷⁸ Luijten 2004, p.198-99.

⁷⁷⁹ Lehrs 1908-34, vol. 7, no .22; An impression of the use of the engraving by collectors is the fact that the British Museum copy has some beautiful contemporary hand colouring, making the print look more sculptural.

⁷⁸⁰ The prints in the albums are mostly ordered by size, typology, or shape of the represented object. Parshall 1982.

prints in the album are German, it is an acknowledgement of the general interest by probably a small network of connoisseurs providing these engravers with a larger share on the market.⁷⁸¹ This is also attested by the fact that Basilius Amerbach purchased the entire workshop stock of design drawings and prints of a Basel goldsmith (cf. supra). A last trace of these design prints in early modern print collections is a collectors' mark of Hartmann Schedel (1440-1514) on the sole Dresden copy of the *St Peter* print of Alart Du Hameel (fig. 6.19).⁷⁸² This famous Nuremberg humanist writer of the celebrated *Nuremberg Weltchronik* (1493), was an avid collector of books and prints.⁷⁸³



Fig. 6.36. Alart Du Hameel, *Thistle Ornament*, 1470-1500. Engraving, 8,9 x 21,9 cm. Dresden, Kupferstichkabinett, inv. 1896-807. Photo: © Kupferstichkabinett Dresden.

An additional indicator that some of these design prints were simultaneously aimed at a collector's side of the early modern print market, recently remarked by De Jonge, was the size of these prints.⁷⁸⁴ Du Hameel's *Monstrance* measures a total height of 1113 cm, spread over three plates.⁷⁸⁵ Another comparable engraving by Master WA, of a *Gothic Crosier*, measures 67.7 cm in height, separated over two plates.⁷⁸⁶ Designing, printing, and mounting the image over pages, required some time and skill which would have raised its market value and price.⁷⁸⁷ When compared to other contemporary prints, Du Hameel's monstrance design would have been one of the largest prints of its time, this putting Prevedari engraving in its shadow. It was only by the early 1500's that mostly cartographic projects such as Rosselli's *View of Florence* (c. 1480) or Jacopo de' Barbari's *Bird's eye*

⁷⁸¹ Stielau 2014, p. 27.

⁷⁸² Bartsch 1991, p. 247.

⁷⁸³ Stauber 1908; Hernad 1990; Landau & Parshall 1994, pp. 94-95; Bubenik 2013, pp. 42-43.

⁷⁸⁴ De Jonge 2011, p. 205.

⁷⁸⁵ Upper sheet: 345 x 151 (top) x 153 (bottom); Middle sheet: 344 x 199 (top) x 204 (bottom); Lower sheet: 424 x 204 (top) x 256 (bottom).

⁷⁸⁶ Lehrs 1908-34, vol. 7, pp. 76-78, no. 49; Hollstein 1947-2020, vol. 12, p. 226, no. 49.

⁷⁸⁷ On large-scale print projects and their market value, see Landau & Parshall 1994, pp. 240-42; Boorsch 2008.

view of Venice (1500) were warranted the expenditure and effort of printing on more than one block or plate.⁷⁸⁸ For comparable undertakings in the Netherlands outside cartographic printmaking, one has to wait until the print production of print publisher Hieronymus Cock who had brought Giorgio Ghisi to the Low Countries to engrave *The School of Athens* (1550) and *The Dispute on the Holy Sacrament* (1552), both on two plates.⁷⁸⁹ Cock followed this by his largest printed undertaking; a set of twenty-seven etchings depicting the *Baths of Diocletian* (1558), based upon design by Sabastiaan van Noyen (1523-1557), engraved by Joannes and Lucas van Doetecum, and commissioned by Cardinal Antoine Perrenot de Granvelle (1517-1586).⁷⁹⁰ Since many large scale engravings were very pricey undertakings, these projects were often sponsored by local or foreign patronage.

6.4. First-generation experiments and continuation

The phenomenon of design prints intended for a wide range of crafts only knew a short lifespan in the Low Countries between 1470 and 1500. After the turn of the century, very few Netherlandish printmakers contributed to the dissemination of architectural designs in print. This stands in contrast to the German situation where after the initiative was made by Master E.S. or Schongauer, many goldsmith-printmakers after 1500, such as Daniel Hopfer, Peter Flötner or Albrecht Altdorfer continued to provide engraved or etched models of vases, weaponry, chalices etc., for other craftsmen to rely upon. Similarly in France, printmakers such as Jacques Androuet Du Cerceau (1510/2-1585/6) and Léonard Thiry (? – c. 1550) continued to produce print series destined for goldsmiths and architects, working in circles of the French court of Francois I at Fontainebleau.⁷⁹¹ In the Low Countries instead the new generation of printmakers turned to more decorative ornament prints (equally used by a wide range of craftsmen), often inspired by German or Italian prints of grotesques.⁷⁹² Lucas van Leyden (1489/94-1533), for example added ornamental prints to his print output throughout his career. While his first ornament prints of foliage were still strongly influenced by prints of Martin Schongauer or Alart DuHameel, by the late 1520s his ornamental engravings showed a clear influence from Italian engravers such as Agostino Veneziano and Giovanni Antonio da Brescia.⁷⁹³ Contemporary to Lucas, other early Netherlandish printmakers such as Dirk Vellert⁷⁹⁴, Alaert Claes⁷⁹⁵ and the Monogamists IG

⁷⁸⁸ Boorsch 2008, pp. 37-39.

⁷⁸⁹ Boorsch 1985, nos. 11 and 13; Luijten 2013, pp. 31-34.

⁷⁹⁰ De Jonge 2013b; Wouk 2017; Waters 2020.

⁷⁹¹ Geymüller 1887; Guillaume & Fuhring 2010; Fuhring 2013, p. 37.

⁷⁹² Horbatsch 2017, pp. 200-220.

⁷⁹³ Filedt Kok 1996, nos. 160-164; Leiden 2011, pp. 312-313. The grotesques in prints by Agostino Veneziano, Giovanni Antonio da Brescia or Giovanni da Udine were the first to be directly inspired by the grotesques in the *Domus Aurea*, see Dacos 1969.

⁷⁹⁴ For Vellert, see Hollstein 1947-2020, vol. 33, pp. 194-7, nos. 8-9.

⁷⁹⁵ Hollstein 1947-2020, vol. 3, p. 155, no. 185.

and IW⁷⁹⁶ produced and published ornament etchings and engravings with grotesque motives, mostly modeled after Italian or German examples.⁷⁹⁷ It was only by the mid-1540s when design prints in the Low Countries started to find a new market with prints by Cornelis Matsys (1510/11-1556) and Cornelis Bos (1506/10-1555), who both published small engravings depicting grotesques with scrollwork, inspired by the ornamental developments at Fontainebleau.⁷⁹⁸ When the printmaker-entrepreneur Hieronymus Cock published design print series after Cornelis Floris, the genre seemed to have found a new breath. Cock's *Designs for Ornamental Tableware* (1548) and *Veelderleij nieuwe inventien van antijcksche sepultueren* (1557), both after designs by Cornelis Floris, were distributed in series or a *boecxken*, often aimed at a combined clientele of collectors and designers.⁷⁹⁹ Bridging the gap between the experimental printed output of late fifteenth-century engravers and Cock's publishing strategies are a group of etchings of the early 1530s, previously attributed to an early phase of Du Cerceau but recently reattributed by De Jonge to an anonymous artist working in the artistic circles of the Habsburg courtly milieu.⁸⁰⁰ This group of etchings encompasses approximately 170 prints, and include models for tableware, jewellery, tabernacles, chimneys, altars, tombs, vessels, bedframes, triumphant arches as well as full house facades. The etcher must have played an important role in disseminating and developing the Antique style in the Low Countries among sculptors, architects, painters, goldsmiths and carpenters alike. His style reflects a familiarity with artists working in the close environment of the Habsburg court of Margaret of Austria and Mary of Hungary, in particular the architectural ornamental language developed by Jean Mone (1500-1548). It combined elements of Lombard Renaissance with the Antique style as it was developed in Spain by Domenico Fancelli and Mone's master Bartolomé Ordoñez.⁸⁰¹ Although very little is known about the artist, his marketing strategies reflect those of the previous generation as he strongly developed upon popular Antique models in sculpture and architecture in the Low Countries. His etchings hold a rare position between architectural drawings and prints as the printmaker often included a grey wash in his etchings in order to imitate the quality of architectural drawings.⁸⁰² While the extending oeuvre of this anonymous draughtsman and etcher does include at least three house façade elevation designs (one drawn, and two etched), the wide range of subjects makes it futile to determine whether the anonymous should be considered an architect, sculptor, carpenter or goldsmith. The producer of these etchers equally belonged to the class

⁷⁹⁶ Hollstein 1947-2020, vol. 13, pp. 38-45, nos. 1-29, pp. 54-60, nos. 4-19.

⁷⁹⁷ A drawing of *A Grotesque with two Sirens*, dated 1520-22, and recently attributed to Gossart seems to have been one of the earliest examples of Antique candelabra and grotesque motif on paper in the Low Countries, see New York 2010, pp. 394-5, no. 107.

⁷⁹⁸ Schéle 1965; Van der Stock 1985; Van der Coelen 1995, pp. 127-28.

⁷⁹⁹ Silver 1993, pp. 3-9; Fuhring 2013.

⁸⁰⁰ De Jonge 2010a; De Jonge 2010b; De Jonge 2010c; De Jonge 2013a; Fuhring 2013; De Jonge 2018; New York 2019, nos. 95-96.

⁸⁰¹ De Jonge 2010b, p. 67-69; De Jonge 2018; Kavalier 2018b.

⁸⁰² Jonge 2010b, pp. 40-42, 60-61.

of architectural designers, which included “all lovers of the arts”. Like those of his precursors Du Hameel and Master W, the etchings were applied by professionals in architectural design. Several of the etchings can be found in the afore mentioned *Basler Goldschmiederisse* of the Schweiger workshop in Basel.⁸⁰³ Interestingly the etchings remained relevant until the end of the century as they were used to illustrate a peculiar manuscript treatise entitled “*Architectura. Dat is Constelicke Bouwijnghen huijt die Antijcken ende Modernen*” (1596-1599), by the Bruges master mason Charles de Beste.⁸⁰⁴ The fact that he was able to rely on these etchings as references to the right building manner for princes and nobility, is a strong indication that they must have found a fertile soil in Netherlandish workshop practice. These loose sheet prints would have been more practical, cheaper, and more visual than the architectural treatises of Coecke or Hans Vredeman de Vries.⁸⁰⁵ Both the prints and drawings of the Anonymous etcher seem to have filled the gap between the individually commissioned drawing and the illustrated treatise and they reached a wide audience of both craftsmen and collectors. That these designs were also collected in courtly circles, is suggested by a booklet in the Rijksmuseum, which includes seventeen drawings by this anonymous artist, dated around 1543-53.⁸⁰⁶ The booklet was clearly a luxurious collector’s item, since all drawings are made on vellum rather than paper, and the frontispiece bares the imperial Habsburg eagle. The booklet gives the impression of a wealthy, cultivated patron with an interest in the Antique architectural language.⁸⁰⁷ Later ownership traces in the booklet show that its provenance can be traced back to the English nobility of the Monk family, whose members served as military officers under Oliver Cromwell in the 1630s.

6.5. Clearing the disciplinary divides: From goldsmith-engravers to peintre-graveurs and painter-architects

Through the art of engraving and thanks to a growing demand for these images, not only as workshop models but as collectables, the early generation of Netherlandish goldsmith-engravers shifted from design of technical engravings to prints as artistic and collectable objects. Interestingly, engravers with professional roots in architectural design not only provided technical design prints but also produced

⁸⁰³ Tanner 1991.

⁸⁰⁴ Brussels, Royal Library of Belgium, ms. II 7617; Van den Heuvel 1994; Van den Heuvel 1995; De Jonge 2010b, pp. 54-55; De Jonge 2018, p. 91.

⁸⁰⁵ This anonymous artist may have introduced the first system of Orders in the Low Countries, prior to Pieter Coecke’s translation of Serlio in 1539, as testified by a book of Orders in Madrid. COAM, Fondo Antiguo, no. 36 (14-FA-36). De Jonge 2011; De Jonge 2014b; De Jonge 2018, pp. 90-91.

⁸⁰⁶ Amsterdam, Rijksmuseum, RP-T-1976-1. Byrne 1977b; Horbatsch 2017, pp. 89-90.

⁸⁰⁷ Byrne rightly remarks that the presence of the imperial eagle was very commonly used by bookbinders under the Habsburg realm. Byrne 1977b, p. 4.

figurative prints. Alart Du Hameel, for example combined his design prints for goldsmiths and stonecutters with the publication of folio prints which anticipated the growing popularity of his fellow townsman Jheronymus Bosch. Both artists were members of the brotherhood of Our Lady – for which Du Hameel was designing the chapel – and may have collaborated on some commissions.⁸⁰⁸ Prints such as his *Last Judgement* or the *War Elephant* not only illustrate his reliance on Boschian typology, style and allegorical compositions, but equally show an architectural designer bridging the gap between architectural design and the visual arts.⁸⁰⁹

Early printmakers held an intermediary position between the masons' guilds and the painters' guilds, enhanced by the fact that they could maintain a somewhat independent position on the art market. Jan van der Stock indicated that as soon as printmakers started to produce images, the Antwerp guild of St Luke made many unfruitful attempts to force these early print publishers to join the guild, resulting in several court cases.⁸¹⁰ This occurred in 1494-95 when the deans of the Antwerp guild of St Luke were confronted with Adriaan van Liesvelt, a printmaker, who refused to enrol. Since all who make 'images and figures' were strictly obliged to join the guild, the dean argued that printmakers should do so as well. Yet van Liesvelt eventually won the case over technical matters of execution and used materials, by stating that he was using ink instead of paint, which was not inconsistent with any of the guild rules as stipulated in the 1442 ordinance. Similar disputes of forcing printmakers to join either the painters or carpenter's guild were common (see chapter 1.6).⁸¹¹ According to the guild regulations they were clearly producing images, yet the material and tools used by printmakers - paper, burin and copperplate - escaped the outdated guild regulations still focused on the production of painted or gilded images, either on parchment, wood or panel. It was a classic case of the law's inability to keep up with technological advances. Since the obligation of early printmakers and engravers to join the guild remained difficult and ambiguous at least until 1558, many publishers of books and prints did not join the guild and were thus free from the sometimes-crippling restrictions stipulated in guild ordinances. While an artist such as Alart Du Hameel principally remained active as a master builder, many contemporary artists who previously were involved in architectural design, either as a goldsmith, or as stonemason or master builder, now shifted their careers towards printmaking as their main occupation; a career switch which in some cases also involved a painting career. When studying the first generation of *peintre-graveurs* between 1480 and 1530, we notice that

⁸⁰⁸ Koldewey draws attention to the stylistic relationship between compositions of Jheronymus Bosch and those on a baptismal font executed by Aert van Tricht but designed by Du Hameel. On the relationship between Bosch and DuHameel see Unverfehrt 1980, pp. 190-96; Koldewey 2002, pp. 44-47; Bass 2015.

⁸⁰⁹ Bartsch 1991, p. 233; Lehrs 1908-34, vol. 7, Nos. 2 and 7.

⁸¹⁰ Van der Stock 1998, pp. 27-58.

⁸¹¹ Already in 1452, the Leuven printmaker Jan van den Berghe was forced to join the cabinetmakers and joiner's guild, since he was using the same print tools a woodcarver would have used for his woodcuts (*Beeldeprynten*) and letters. Van Even 1870, p. 101; Bruijnen 2011, p. 37; Van Grieken 2012, p. 47.

many were originally goldsmiths or architectural designers.⁸¹² It is this generation which played a key role in the dissemination of architectural design knowledge to the painter's workshop. A good example to illustrate this is the career of Jan Rombouts (1475/85-1535), the son of a slater (*schaliedecker*), who quickly emerged as a painter and one of the early engravers in the sixteenth century.⁸¹³ His known printed oeuvre, however, does not include a single design print but rather consists of devotional prints, often based upon more popular prototypes by Albrecht Dürer, Lucas van Leyden or Martin Schongauer.⁸¹⁴ The architectural background of the painter may perhaps be felt in the often elaborate Antique architectural compositions which recall those of in the paintings of Bernard van Orley or the engravings of Allaert Claesz. of Mechelen.

6.6. Conclusions

In retrospect, it is important to acknowledge the production of these earliest engravers within a larger European spectrum, as parallel developments occurred mostly in Germany. Early printmakers such as Master E.S., Martin Schongauer, Wenzel von Olmütz and Israel van Meckenem shared a very comparable printed output of utilitarian design prints aimed at the same wide variety of 'architectural designers', for lack of a better word. Especially at a time when borders between regions were very fluid, these early engravers were hardly working in isolated environments but were very much aware of each other's activities. Master ES, Martin Schongauer and Van Meckenem all had their goldsmith and print workshops in the Lower Rhineland, bordering on the Burgundian territories. Van den Mijneeste and Du Hameel, on the other hand were working in the eastern parts of the Burgundian realm, and often collaborated with other craftsman from across the border, such as Du Hameel's designs for Hendrik de Borchgrave from Cologne, and Van den Mijnnesten's close ties with the wood carvers from Kalkar and the Kleve region. It is not a coincidence that all these goldsmiths turned engravers were located within broadly the same geographical area of Limburg, Guelderland, Cleve and the Lower-Rhineland. Although the exact location of the workshop of Master W remains uncertain, circumstantial evidence does point more towards the north-east of the Burgundian territories, rather than Bruges.⁸¹⁵ The engravings made by Master W for prayer nuts seem to point more towards a segment of the print market in the north, where most workshops of prayer nut production were located. Perhaps most significantly, the *Flying Buttress* with open arcade, first famously applied in the Cathedral of Amiens, is typologically comparable to those used in the eastern parts of the Low

⁸¹² Kik 2014a, pp. 80-81.

⁸¹³ Bruijnen 2011; Bruijnen 2012.

⁸¹⁴ On Jan Rombouts' print production, see Bruijnen 2011, pp. 37-55; Van Grieken 2012.

⁸¹⁵ This was already vaguely suggested by Filedt-Kok 1989, p. 167.

Countries or the Lower Rhine. Especially the flying buttresses used in the Choir of Cologne Cathedral (c. 1280-1322) show a striking similarity to the engraving in their general architectural composition. The combination of flying buttress topped with an ornamental arcade seems to have been mimicked in the print. In addition, the sculpted trefoil decoration on the diagonally placed buttress piers points towards a direction of Cologne as a direct source of inspiration for Master W's engraving. Another argument for placing Master W more eastwards is the print series depicting the troops and encampments of Charles the Bold, which has always been the main argument for placing the engraver in the direct entourage of the Burgundian Duke in Bruges. Yet, we need to be reminded about the fact that much of Charles the Bold's military activity was situated in Guelders where the luxurious display of the Ducal encampments attracted a lot of public attention.⁸¹⁶ A printmaker working in this geographical region may have seen the presence of the Burgundian troops as a keen commercial opportunity. Another indication is the fact that many of Master W's plates seem to have been reused in Van Meckenem's workshop in Bocholt, as many the latter's design prints for metal ware are pirated reverse copies of older engravings of Master W and Martin Schongauer.⁸¹⁷

That fellow goldsmith-engravers like Van Meckenem showed an interest in these prints to distribute them and label them as part of their own print catalogue is telling about the early reception and market value of these images. A considerable difference however between the production of design prints of German and Netherlandish printmakers is that that the content of the latter's prints seemed to have been directed more to local demands. While also providing more traditional and international designs for reliquaries, vessels and monstrances, printmakers like Master W and Van den Mijnnestne seem to have addressed a specific segment of the print market with their designs for figural groups and architectural frameworks for the production of Netherlandish carved altarpieces in Brabant and the eastern regions of the Low Countries.⁸¹⁸ The previously mentioned prayer nuts also only addressed a rather small niche in the early modern print market.⁸¹⁹

The fact that an architect such as Du Hameel engaged himself on the burgeoning print market was also an indirect result of the changing professional organization of the architectural context in the

⁸¹⁶ We are reminded in this context on how the captured possessions of the Ducal encampments after the Battle of Grandson in 1476 (the so-called Burgunderbeute) was displayed by the Swiss troops to the public. Mäder 1969; Jucker 2009.

⁸¹⁷ The Illustrated Bartsch, vol. 9, nos. 105, 142, 143, 172, 173, 174.

⁸¹⁸ Comparable German engravings for woodcarvers or stone masons are, not entirely surprisingly, to be found in the workshops of Veit Stoss (c. 1450-1533) or Peter Flötner, both wood carvers by their main profession. As one of the most famous wood sculptors of Southern Germany, Stoss was also engaged in the production of printed images, which included a gothic capital covered with foliage or *Astwerk*. Flötner was responsible for large numbers of prints depicting furniture such as doorways, fireplaces, and window frames. See Baxandall 1980, pp. 191-202; Koreny 1985; Landau & Parshall 1994, p. 9.

⁸¹⁹ It is significant to remark that these prints for carved altarpieces or prayer nuts were not among the ones copied by Israel Van Meckenem.

Low Countries. As recent studies have emphasized, by the last quarter of the fifteenth century architectural commissions in the Low Countries were increasingly dominated by a few privileged architectural designers such as the members of the Keldermans family. Although Du Hameel was part of this increasingly exclusive network of Netherlandish architects, the architect from 's-Hertogenbosch benefitted from the distribution of his designs through the new mass medium of printed images which may even have provided a stimulus for architectural commissions outside his hometown. That local demands were addressed is not only evident from the utilitarian nature of the prints but also how these early printmakers reacted to stylistic fashions and innovations. Du Hameel's baldachin was hardly an arbitrary or generic Gothic type but copied one of the more popular models in the Low Countries, while the anonymous etcher reacted to the most novel local and courtly interpretations of the Antique, as it was being developed by Mone in the late 1520s and 1530s. By showcasing the newest advances in ornamental and architectural style, these early Netherlandish printmakers not only addressed their fellow craftsmen but equally spoke to a young market of dilettantes and collectors of prints, with a growing interest in architectural language. Some prints of Du Hameel, Master W, or many of the etchings and drawings of the anonymous designer display such a high amount of visual refinement and workmanship that they can be valued as individual art works, rather than mere workshop stock models, as is confirmed by their presence in early modern collections. The fact that these etchings and engravings addressed these two ends of the print market, indicates that these design prints served a dual function. Du Hameel's *Monstrance* print is a fine example to illustrate this point (fig. 6.2). Although the inclusion of the partial ground plan is a way of communicating technical information to fellow goldsmiths to execute this or similar objects, its sheer size and the amount of sophisticated exhibited detail may point more towards its application as a luxurious collectible. While this may seem contradictory, both functions do not necessarily exclude each other.⁸²⁰

Not only were these design prints instrumental in disseminating technical and stylistic architectural knowledge to a wide audience spread over the continent, but their early Netherlandish printmakers also who designed those prints were key players in between different crafts. Since only the execution and the used material to create an object were regulated by guild ordinances, the design of these object remained untied to one specific guild. Especially when early modern printmakers did not fit into any existing guild, they were freer to design for a wide variety of crafts. By applying their architectural design skillset to the copperplate or etching ground, these artists managed to bridge the traditional divide between the guilds of master masons (traditionally the *Vier Gekroonde*), goldsmiths (guild of St Eloy) and the guild of St Luke. In many cases, this professional cross-over also saw these

⁸²⁰ De Jonge suggested that this print may have been a luxury edition of a now lost smaller edition. De Jonge 2011a, p. 201.

designers shifting more to the visual figurative arts, often engaging these artists with architectural family roots in painting. When viewing this phenomenon with a comparative international scope, it is perhaps possible to speak of a general social pattern. The social phenomenon that a considerable group of goldsmiths or architectural designers in the Rhine area and the Low Countries were shifting their occupation also had severe implications on the social standing of the artist which coincided with humanist influences on thinking about the artistic identity of early modern craftsmen. The further development of this social professional pattern and the effects of it on the social position of the Netherlandish artist will be further explored in the next chapter.



·PART III·

SOCIAL MOBILITY AND STATUS
EMULATION THROUGH GEOMETRY

“In the Middle Ages, [...] man was conscious of himself as a member of a race, people, party, family, or corporation – only through some general category. [...] In Italy this veil first melted into air; an objective treatment and consideration of the State and of all the things of this world became possible. The subjective side at the same time asserted itself with corresponding emphasis; man became a spiritual individual and recognized himself as such.”

Jacob Burckhardt, *“The Civilization of the Renaissance in Italy”* (1860)⁸²¹

A growing self-awareness and conscious self-fashioning have been associated with the Renaissance artist, ever since Jacob Burckhardt made his influential attempt to define the Renaissance individual.⁸²² Although many of Burckhardt’s problematic claims and arguments have since been subject of criticism, nuanced or fitted to a wider European context, there is no denying that also in the Low Countries there could be witnessed novel art theoretical interpretations and social repositioning of painters as individual artists (despite their dependencies upon the guild structures).⁸²³ Where in the previous chapter, we explored the transfer of geometrical design knowledge between different professional players in the Low Countries, the aim of the following chapter is to focus on the social impact of this development. By examining the social position and reputation of the more traditional group of geometrically skilled designers (particularly master masons and goldsmiths) we will establish the argument that the transfer of geometrical know-how to other professional groups such as painters and early engravers equally allowed for a transfer in social position. Instrumental to the construction of this argument is an examination of the signing methods and manners of self-representation by painters and engravers. The association of painters and engravers with geometrical expertise aided in their struggle for recognition as an art since geometry was considered one of the seven liberal arts. Finally, we will explore how this discourse changed by the middle of the sixteenth century and how other approaches were taken in the elevation of painting as an individual art form.

⁸²¹ Burckhardt 1860, p. 98.

⁸²² For example, see Wittkower & Wittkower 1963; Greenblatt 1980; Ames-Lewis 2000, pp. 209-42.

⁸²³ For a recent critical approach to the artist’s self-fashioning, see Burke 1986; Martin 2004, esp. pp. 32-41.

7. Social distinction through the art of Geometry

7.1. The professional status of the geometrical designer

7.1.1. *The status of architects*

During the course of the fifteenth century the social position and esteem of the architect in the Low Countries went through some considerable changes. This was the result of a widening gap between the design process and the construction process.⁸²⁴ Traditionally, the master of the works combined both the design process and the daily supervision of the building progress of the edifice which required a continuous presence on a single building site and reduced the mobility of the architect. The emerging building boom in the Low Countries, combined with the increasing standardisation of construction parts at the quarries led to a changing role of the architect. Architects such as Evert Spoorwater and Rombout Keldermans were required to supervise a large amount of ongoing building projects simultaneously. This was only possible thanks to an increased division of labour.⁸²⁵ The tasks of designing, ordering of building material and supervision of the assembly on site were no longer carried out by one person only. Instead, the designer delegated the daily supervision to a contractor, who is usually referred to in the contracts as *appeleerder*. This resulted in a class of professionals who were able to distinguish themselves as architectural designers *pur sang* who formed a semi-closed professional network of top architects who obtained the majority of all prestigious design commissions in the Low Countries. By the close of the fifteenth century, some architectural designers had not only become considerably wealthy but had received impressive courtly recognition. The best example is perhaps the social climb made by the Keldermans dynasty. The first known master masons in the family such as Jan (Van Mansdale) Keldermans (d. 1425) only executed local commissions by the city of Mechelen as stone cutters. As their technical expertise was transferred through the generations, both the number and prestige of their commissions grew, culminating with Rombout II Keldermans (d. 1531). During his career, Rombout was able to design, collaborate and advise on practically every major courtly, ecclesiastical and military building project in the Habsburg Low Countries.⁸²⁶ In 1516 he received the prestigious title of “the emperor’s master builder”, a title which also his brother Anthonis II (d. 1515) had received a few years earlier.⁸²⁷ In 1531, when Rombout was making preparations for

⁸²⁴ Hurx 2018, pp. 207-39.

⁸²⁵ Meischke 1987; Hurx 2014; Hurx 2018, pp.217-229.

⁸²⁶ Van Wylick-Westermann 1987, pp. 20-23; Hurx 2018, pp. 222-31.

⁸²⁷ Anthonis II Keldermans had been appointed ‘*meester werckman ons heeren des conincx*’ for his work on the King’s House in Brussels in 1515. Van Wylick-Westermann 1987, p. 20.

the grand choir enlargement for the Antwerp Church of Our Lady, he was ennobled by Charles V and could henceforth call himself *jonker*.⁸²⁸

Based upon socio-economic information such as the personal income as a determining argument in the architect's social position, many architectural draftsmen's income by the end of the fifteenth century can serve as an indication of their high contemporary standing. Not only were renowned architects paid considerably well for their designs and drawings, but many of the most prestigious architectural designers also working in the Low Countries descended from families of stone merchants (such as the Keldermans family) or were still active as stone suppliers (such as Loys van Boghem). Within the early modern social stratification stone merchants and professionals in the building trade were able to accumulate considerable sums as the stone quarries were controlled by only a few notable families, who supplied to many of the ongoing building projects during the building boom of the Low Countries.⁸²⁹ Godevaert de Bosschere, one of the most important Brussels entrepreneurs in the stone business, combined his managing of Brussels stone quarries with several highly regarded public offices, such as his election to the post of city treasurer of Brussels in 1473 as a representative of the Brussels crafts guilds – a position which he shared with the aristocratic master mason Hendrick de Mol.⁸³⁰ A commemorative medal which was made for the occasion of his election proudly shows the coat of arms of the de Bosschere family. Stone traders and quarry owners could often be ranked among the urban elite and had close professional or family ties to the municipal and courtly aristocracy in the Low Countries. Since many professionals in the stone trade were active as architectural designers, this social esteem and elite network reflected on the architect's status.

Apart from the income and the network of prestigious commissioners, a crucial element which added to the social standing of architectural professions was their expertise in the field of geometry. As component of the *Quadrivium*, Geometria was a member of the Liberal Arts, which was a powerful instrument for social emulation.⁸³¹ Within an early modern urban and courtly humanist network, knowledge of the quadrivium considerably gained prominence. Through the course of the fifteenth and sixteenth centuries European intellectual and humanist thinkers valued the mathematical quadrivium alongside the already established the language-based and more scholastic trivium in their search for knowledge and rationalisation of the perceived world.⁸³² This mathematical reasoning coincided with a novel aesthetic rationalism, connected closely with the study of proportions in the

⁸²⁸ Génard 1856, p. 339; Van Wylick-Westermann 1987, p. 22; De Jonge 2010, p. 117; Hurx 2018, p. 237.

⁸²⁹ Meischke 1988; Van Essen & Hurx 2009; Hurx 2009; Hurx 2018, pp. 127-169.

⁸³⁰ Vanden Broeck 1988, p. 126; Hurx 2018, p. 189.

⁸³¹ Kristeller 1980; Filipczak 1987, pp. 11-19.

⁸³² Reiss 1997.

visual arts and music.⁸³³ The proportions of the human body, architecture and sculpture were reduced to and comprehended by general arithmetical or geometrical principles as explained in the writings of Vitruvius, Alberti, Pomponius Gauricus, Piero della Francesca or Luca Pacioli. It is in this humanist learned context of growing interest in geometrical principles that the booklets on geometry of Mathes Roriczer should be perceived. His *Fialenbüchlein* and *Geometrica Deutsch* were both dedicated to Wilhelm von Reichenau (1426-1496), bishop of Eichstätt, a patron with a distinct interest in architectural and artistic developments.⁸³⁴ The poem on von Reichenau's epitaph, which lauds his wisdom, was provided for by Willibald Pirckheimer, who would later become Dürer's truest humanist friend and supporter.⁸³⁵ As a result of this growing importance of the quadrivium with a humanist urban middle-class, the ability to apply geometrical and arithmetical principles with a compass and rule increasingly distinguished the architectural designer from other manual craftsmen, including painters. Applications of such terms as *artiest*, *Constelijck*, *scientie* and *ingenium* often refer to a craftsman's mastery of the liberal art of geometry.⁸³⁶ A very early example can be found in a commemorative stone placed in the apse of the Church of Our-Lady in Aarschot in 1337, with a Latin inscription which describes the French master mason Jacques Piccart as a designer gifted with *artifice* (from *artificium*), meaning being competent in the arts.⁸³⁷

Even more unambiguous is the praise given to Rombout Keldermans and Domien de Wagemakere in their 1518 contract for the town hall of Ghent, in which the two master builders are praised for their "*industrie, scientie, experientie, verstand ende goet advys*".⁸³⁸ The *scientie* in the phrase ought to be interpreted as theoretical knowledge of the *ars* of Geometry.⁸³⁹ Pieter Coecke used the term *Scientie* to illustrate a similar point when he explained that *his Inventie der Colommen* (1539) dealt with 'the science of Architecture', which he quotes Cesariano's 1521 Vitruvius edition.⁸⁴⁰ Coecke also received the title *artiste de l'empereur* (artist to the emperor), for his works for the Habsburg Court and his expertise in the Antique style.⁸⁴¹ Although the Burgundian-Habsburg rulers had a long

⁸³³ Panofsky 1955, pp. 91-93; Baxandall 1972, pp. 94-108; Reiss 1997, pp.135-54.

⁸³⁴ Shelby 1977, p. 36; Hubach 2008. On Wilhelm von Reichenau see Fink-Lang 1985; Chipps Smith 2006, pp. 49-55.

⁸³⁵ Mader 1924, vol.1, p. 100.

⁸³⁶ The term could also refer to any technical ability or skill, see Verwijs & Verdam 1885-1952, vol. 6, pp. 1810-13. On the use of these terms in the Low Countries within a specific courtly context, see De Jonge 2010a; De Jonge 2017b.

⁸³⁷ *M SEMEL X SCRIBIS TER C/ TER ET V SEMEL I BIS :/ DUM CHORUS ISTE PIE FUNDA/ TUR HONORE MARIE/ SAXA BASIS PRIMA KYLLA/ NI LUX DAT IN YMA/ PICCART ARTIFICE LACOB A PRO QUO ROGITATE*

⁸³⁸ Van Tyghem 1978, vol. 2, p. 388; Philipp 1989, pp. 74-75; De Jonge 2010a, p. 117; De Jonge 2011a, p. 200.

⁸³⁹ De Jonge 2010a, p. 118. The use of the term *Scientia* as an indicator of theoretical knowledge of Euclidian geometry is famously used in the early-fourteenth century 'Ars sine scientia' debate on the building site of Milan Cathedral. Ackerman 1949.

⁸⁴⁰ '*Architectura (dats overboumeesterie) oft (als Cesarianus beghint) die scientie vanden architect.*'. Coecke van Aelst 1539, fol. 5a.; Miedema 1980, p. 73; De Jonge 2011b, p. 202.

⁸⁴¹ De Jonge 2010b, pp 115-22; De Jonge 2014b, p. 1; De Jonge 2017b, p. 135.

tradition of employing court artists, they were most often a member of the court administration or exceptionally received the function of *Valet de Chambre*, as in Jan Van Eyck's appointment at the court of Philip the Good.⁸⁴² The term artist was very novel in the Low Countries and was previously used by the sculptor Jean Mone, who is referred to in contemporary documents and contract as '*artiste*', as early as 1522. On several other occasions in 1524, 1527 and 1547, the sculptor is referred to '*Mr Jannen Artiste*'.⁸⁴³ He had probably adopted the term during his years working alongside Bartolomé Ordoñez in Barcelona.⁸⁴⁴ Interestingly, he also signed his own work in this manner as the St Martin's Altarpiece in Halle (1533) bears the inscription "IAHAN. MONE. MAISTRE. ARTISTE. DE. LEMPEREUR". The fact that Mone would stress this term, only indicates the noble and learned connotations associated with it. In a recommendation letter of 1524 Mone is praised for his knowledge in the Artes: "*exquis en artz*".⁸⁴⁵ Almost contemporary to Mone, the courtly sculptor and architect Jacques Du Broeucq was also referred to in contracts as *Jacques l'artiste* and *maistre artiste de l'empereur*.⁸⁴⁶ In all three occasions, these were 'artists' with an urban background, working on the highest courtly levels and were engaged in the theoretical and practical design of architecture, based on the use of geometry. Interestingly, also Jan Van Scorel, who was not working in a courtly context, signed one of his early works with "*Joannes Scorel hollandius pictorie artis amator pingebat 1520*".⁸⁴⁷ This recalls the introductory text of the previously discussed geometrical and architectural treatises, such as Dürer's *Unterweysung* or Pieter Coecke van Aelst's 1539 treatises, which are addressed to the "all lovers of art".

Adding to the prominence of geometry and geometrical design in general was the Medieval tradition of aligning the perfection of geometrical figures to theological concepts of the divine.⁸⁴⁸ Texts ranging from Cassiororus (c. 485-580) to Boethius (c. 477-524) view geometry as the driving force of creation and as an instrument for comprehending God's own design. Boethius argues in his *De Institutione Arithmetica* (c. 500) that "God founded the first principle [of the quadrivium] as the exemplar of his own thought and established all things in accord with it".⁸⁴⁹ Illuminations of God holding a compass during the times of creation are omnipresent and illustrate the concept of divine geometry.⁸⁵⁰ The fact that architectural designers applied the same methodological and conceptual tools which were used by God during earth's creation gave architects an almost mystical aura. For the

⁸⁴² Martindale 1972; Warnke 1985; Lorentz 2017.

⁸⁴³ De Jonge 2011a, p. 112.

⁸⁴⁴ De Jonge 2017b, p. 133.

⁸⁴⁵ De Jonge 2011a, p. 113.

⁸⁴⁶ *Ibid.* pp. 122-23.

⁸⁴⁷ Wilenski 1960, vol. 1; Suykerbuyk 2013, p. 38.

⁸⁴⁸ Reiss 1997, pp. 31-35; Kavalier 2017, pp. 48-52.

⁸⁴⁹ Boethius 1983, p. 73; Reiss 1997, p. 147.

⁸⁵⁰ Friedman 1974.

visual arts in the Low Countries, it was essentially the writings of Nicholas de Cusa (1401-1465) which influenced the debate and image of geometry as divine power.⁸⁵¹ In his *De docta ignorantia* the circle and sphere were considered as divine forms of the cosmos and “with Geometry He gave it a balanced design upon which depends its stability and its power of controlled movement”.⁸⁵² De Cusa’s views on geometry were profoundly influenced by the debates in fifteenth-century Christian Neoplatonic literature (see chapter 3.3.3). In Plato’s *Timaeus* (c. 360 B.C) the members of the platonic dialogue argue how the creation of the world is expressed in geometrical shapes and solids. According to Plato, the classical elements (earth, water, air, and fire) were composed out of polyhedral elements. A fifth polyhedron, the dodecahedron, was to represent the all-encompassing element of ether “which God used for arranging the constellations on the whole heaven”.⁸⁵³ As we already saw in our discussion of the polyhedral solids present in the Amsterdam sketchbook, this concept became one of the foundations of Euclidean thinking, and thus found its way to a more general knowledge for architectural designers working in a great variety of media.

7.1.2. *The status of goldsmiths*

Both the Upper Rhine area and the Low Countries were prime centres for the production and export of fine metalwork and centres in which goldsmiths held a high social position.⁸⁵⁴ Goldsmiths were among the wealthiest, most highly esteemed, and influential members of society. Many of them also worked as bankers, and because of the high standards of workmanship demanded by their patrons a rigorous training was given to apprentices, producing very skilled workers.⁸⁵⁵ By the late fifteenth century the goldsmith’s art had become extremely refined, elaborate, and expensive, ever improving in order to meet the high demands of their patrons. The high social status of these patrons often equally reflected onto the goldsmiths themselves. Ownership of gems and precious metals such as gold or silver was far beyond the means of the majority of the population and could only be afforded by the Court and the Church. Hugo van der Velde has compared the incomes and revenues of Gerard Loyet (fl. 1466 – 1502), goldsmith at the court of Charles the Bold with those of contemporary painters working in Flanders.⁸⁵⁶ In 1467, Loyet received a payment of 1200 lb. for a golden statuette, which was presented as a votive gift from Charles the Bold to Liège Cathedral. By comparison, Hugo van der Goes received ‘just’ 360 lb. for the completion of two Justice panels and a *Last Judgement*, commissioned

⁸⁵¹ On Nicholas de Cusa and artistic production, see Koerner 1993, pp. 127-38; Reiss 1997, pp. 30-34; Schneider 2011; Bocken 2012; Schwaetzer & Hochschule 2012; Carman 2014.

⁸⁵² De Cusa 1956, pp. 118-19.

⁸⁵³ Plato, *Timaeus*, 55C.

⁸⁵⁴ On the social position of goldsmiths in the Upper-Rhine area, see Eser 2012b.

⁸⁵⁵ Hunnisett 1998, p. 9.

⁸⁵⁶ Van der Velden 2000, pp. 65-67.

by the city of Leuven.⁸⁵⁷ Also Dirk Bouts was promised a payment of 200 Rhenish guilders for his work on the Last Supper in 1464 for the Confraternity of the Holy Sacrament of Leuven; scarcely more the wage of any other skilled craftsman.⁸⁵⁸ Obviously, a large proportion of this cost difference is due to the intrinsic value of the materials. However, goldsmiths' work was also highly valued because it fulfilled an important role in state ceremony. Especially in the Burgundian 'spectacle state', goldwork was an essential means through which to manifest power and eloquence by means of sheer splendour and magnificence. Gold and silver dominate the inventories of the Burgundian treasury and goldwork (alongside tapestries) was the favoured gift *par excellence* in diplomatic meetings, where golden goblets or statuettes were frequently exchanged.⁸⁵⁹ The elaborate display of luxurious vessels, cups and metalwork was a standard element of festivities and receptions at the Burgundian and Habsburg court. In the context of ecclesiastical commissions, goldwork and jewellery offered the ultimate praise of the Lord, their intricate design and divine glitter could simply not be achieved in painting. The high value of the materials they worked with added to the goldsmith's social standing and the high level of clientele of some of the top goldsmiths allowed them (or family members) access to the highest social circles of society. Nicolaes van Arcle (active 1500-1542), son of the Brussels goldsmith and master of the Mint, Jan van Arcle (c. 1450-1514), was able to climb up the social ladder to hold the esteemed and affluent position of master to the General Audit Office in Brussels (*Rekenkamer*).⁸⁶⁰ A goldsmith (and bronze sculptor) whose fame was nearly comparable to that of Leone Leoni or Benvenuto Cellini is perhaps the famous Antwerp goldsmith Jacques Jongelinck (1530-1606), of whom it was said that he was on familiar terms with Antoine Perrenot de Granvelle (1517-1586) and many courtly officials.⁸⁶¹ Jongelinck's father and grandfather had not only been well-to-do goldsmiths, but had also been able to combine this craft with becoming master of the Mint, and thus generated a whole new stream of income.⁸⁶² At times goldsmiths also took on the additional role of money changer or banker, a profession that by the early sixteenth century had become notorious for its wealth.⁸⁶³ Both the income and prestige they gained from this activity was often considerable. The growth of the goldsmith's wealth and prestige during the fifteenth century, is something the guilds themselves were very keen on to protect it by become more exclusive. On several occasions the Antwerp goldsmith guild raised their enrolment fees and in a new ordinance of 1492, they declared that from then onwards also

⁸⁵⁷ *Ibid.* Even when taking the material value of the metal, silver and gold into account, the difference remains considerable. Both were highly prestigious commissions.

⁸⁵⁸ Van Uytven 1998, pp. 181-87; On the income of 15th-century Netherlandish painters in general, see Martens 1999, pp. 401-413.

⁸⁵⁹ Laborde 1851; Belozerskaya 2002, pp. 84-104; Belozeskaya 2005, pp. 64-70; Helfenstein 2013.

⁸⁶⁰ Roobaert 2015, vol. 2, pp. 24-26.

⁸⁶¹ Smolderen 1969, pp. 141-44; Roobaert 2015, vol. 1, p. 285.

⁸⁶² Smolderen 1969, p. 8.

⁸⁶³ Schlugleit 1969, p. 31; Van Hemeldonck 1988, p. 30; De Roover 1999; Roobaert 2015, pp. 212-18.

children of free masters were obliged to pay a fee when joining the guild.⁸⁶⁴ This increasingly exclusive behaviour was denounced during a court conflict between the guild of jewellery- and gold sellers (*creemers*) and the guild of St Eloy in 1524. The *creemers* complained that the enrolment fee of 10 lb. or more was pernicious for the craft itself, since this resulted in a 'brain drain' of less prosperous but perhaps talented young artists, who were mostly poor.⁸⁶⁵

A growing sense of social self-awareness and of professional pride can be noticed in the contract of the Brussels goldsmith Hendrick Bosch for a new reliquary shrine for St Gudele, in 1530, where he stated that with the commission he "wished to be admired as a true master and artist (*kunsteneer*) in his craft in order to attain fame and a reputation".⁸⁶⁶ As mentioned earlier, the term *kunsteneer*, not only referred to his general set of artistic skills, but mostly to his geometrical design skills, and its association with the liberal arts. This association with one of the Liberal Arts was regarded with higher esteem than other artistic activities, such as painting and sculpture, which were only considered minor mechanical arts.⁸⁶⁷ Although *Metallaria* (blacksmithing and metallurgy) was traditionally considered a mechanical art, like the architects, the association of goldsmiths with the liberal art of *Geometria* elevated the craft to another level.⁸⁶⁸ It is precisely this geometrical knowledge which had such a tremendous impact on the social standing and self-image of other professions such as engravers or painters (see also chapter 6.5).

A rare literary source which demonstrates the fame and esteem of Netherlandish goldsmiths is *La Couronne Margueritique* (1505) by Jean Lemaire de Belges (c. 1473-1525), poet and humanist at the court of Margaret of Austria.⁸⁶⁹ The *Couronne* is a humanist allegorical poem, written shortly after the death of Philibert de Savoy, and named after the crown commissioned from *Merit*, the goldsmith of *Roy Honneur*. The crown is to be assessed and approved by a long list of artists, making the poem the first art historical writings on Netherlandish art before Lampsonius or Karel Van Mander.⁸⁷⁰ Besides a wide range of Early Netherlandish painters such as Van Eyck, Van der Weyden, Bouts and Van der Goes, the list also includes a great number of goldsmiths of contemporary renown, which included

⁸⁶⁴ Schlugleit 1969, p. 29, 118.

⁸⁶⁵ *'De goudsmeden nyet en arbeysten de neeringhe alhier te vermeerderen, maer ter contrariën, te verdryvene, want sy hebben gheimpetreert dat nyemant inder natiën van den goudsmeden comen en mach hy en moet gheven thien pont grooten Vleems oft meer, waerdore alle constenaers ende goede wercklieden die meest al scamele gesellen zyn van hier verdevene worden, ende vuyter stadt gebouden worden'*. Schlugleit 1939, p. 47.

⁸⁶⁶ *'begeerde als meester ende kunsteneer van zyne voirseide ambacht in kinnisse ende reputatie te commen ende gefameert te wordene'*. Roobaert 2015, p. 291.

⁸⁶⁷ On the origins of the divisions between liberal, technical and mechanical arts, see Kristeller 1980; Long 2001, pp. 102.

⁸⁶⁸ At the same time, the liberal arts of the Trivium such as *Poetica* or *Rhetorica* were equally used by artists and Rhetoricians to elevate their social artistic status. Both developments seem to be like two sides of the same coin.

⁸⁶⁹ For biographical details, see: Pinchart 1866; Lemaire 1891, vol. 4; Duverger & Dhanens 1942; Frappier 1963; Jodogne 1972; Doutrepont 1974; Van der Velden 1998, pp. 73-77; Fontaine 2005, pp. 225-29; Eichberger 2018.

⁸⁷⁰ Pinchart 1866; Stechow 1989, pp. 26-29.

Donatello of Florence, but mostly goldsmiths working at court of Margareta and Louis XI of France.⁸⁷¹ Illustrating goldsmiths' versatility to design in and for a wide range of media is the mentioning by Lemaire of a certain Jean de Rouen:

“And thou, speak up I pray, Jean de Rouen,
Thy fame has spread from Paris to Arles
in Casting, Sculpture, and the weaver's craft,
The art of chasing also is thy pride,
in Architecture and in painting too,
Thou art entrusted with many tasks
As thy high noble spirit dares to meet.”⁸⁷²

The fact that the entire subject of *La Couronne Margueritique* is devoted to the making of a precious golden crown, is telling for the high status bestowed upon fine piece of metal work and their creators.

The profession of goldsmith was so highly esteemed that it was even practiced by some members of the Burgundian-Habsburg nobility. Gerard Geldenhower reported in his *Vita clarissimi principis Philippi a Burgundia* (1529), how pope Julius II 'considered Philip of Burgundy to be both a critic of art and a practitioner, for he had learned the goldsmith's art as a young man'.⁸⁷³ Having grown up at the Burgundian court of Philip the Good and Charles the Bold, the importance given to fine goldsmiths' work clearly reflected upon the upbringing of Philip of Burgundy.

When working for wealthy patrons or prestigious commissions, many goldsmiths sought to distinguish themselves within the urban guild environment. When the Antwerp goldsmiths separated themselves from the Guild of St Luke (see, chapter 1.4.), they were only able to do so thanks to their improved financial status. The financial foundation of the newly founded guild was based upon several testamentary gift of prosperous goldsmith who had left many of their possessions to the deans, which ensured their institutional independence.⁸⁷⁴ The Antwerp goldsmith Willem van Nerenbroeck left annuities on twelve different houses in the city to the guild in 1461.⁸⁷⁵ Also in Brussels the gold and silversmiths had become very prosperous. About the Brussels goldsmith and notorious Calvinist Adriaan de Briedere (c. 1505 - c. 1575) it was said in a court trial of 1567 that he was able to live from his annuity (*levend opt zyne*) without having to enter his workshop.⁸⁷⁶ Not unlike architects such as

⁸⁷¹ Lemaire 1891, vol. 4, pp. 162-166.

⁸⁷² “*Jean de Rouen, ie te pry que tu parles: / Tu as eu bruit de Paris insq'en Arles / En l'art fusoire, et Sculptoire, et fabrile: / Malleatoire aussi fut utile / D' Architecture, et de la peinture ensemble / Tu te meslas par tel usage et style / Que ton engin plus haut qu'humain ressemble*”. Lemaire 1891, vol. 4, p. 166. Translation by Stechow 1989, p. 29.

⁸⁷³ Geldenhower 1901, p. 232; Schrader 2010, p. 51; Weidema & Koopstra 2012, pp. 47-48, no. 38.

⁸⁷⁴ Schlugleit 1969, pp. 21-23.

⁸⁷⁵ *Ibidem*, p. 22

⁸⁷⁶ Roobaert 2015, vol 1, pp. 278-79.

Godevaert de Bosschere or Loys van Borghem; he was also the owner of chalk quarry which delivered to many building sites in the Low Countries. Almost all goldsmiths of Brussels were house owners in well-to-do parts of the city and some of them owned several houses which they rented out and owned land outside the city.⁸⁷⁷ Peter de Becker (active 1484-1527) - a renowned goldsmith with a considerable workshop who had collaborated on the funerary tomb of Mary of Burgundy in Bruges between 1494 and 1498 - owned several farmhouses in Eppegem, north of Brussels, and belonged to the most prosperous members of the city.⁸⁷⁸

The fame and high standing enjoyed by goldsmiths in the Low Countries during the first decades of the sixteenth century is strongly reflected in the travel diary kept by Albrecht Dürer, during his journey in the Low Countries. Although this diary is often regarded as a prime source on Dürer's contacts with Netherlandish painters, it is equally interesting for the interactions with local goldsmiths. Between the 5th and 19th of August 1520, the painter mentions having dinner with Alexander the Goldsmith and giving him four new prints.⁸⁷⁹ This Antwerp goldsmith is probably Alexander van Bruchsal, who was active in Antwerp since 1505 and enlisted in the guild of St Luke in 1516.⁸⁸⁰ Interestingly, Dürer also mentions that he made 'a sketch design of a lady's turban for the goldsmiths'.⁸⁸¹ During his second visit to Antwerp in late April 1521, Dürer had another dinner with the goldsmith Alexander, who is now described as 'a man of wealth and substance'.⁸⁸² Later in July, the German artist had dinner in Brussels with Jan van de Perre (c. 1490 – 1559).⁸⁸³ Van de Perre was courtly goldsmith of Charles V, and had delivered numerous pieces of luxurious tableware and the official insignia for the Order of the Golden Fleece.⁸⁸⁴ In 's-Hertogenbosch he is received by the goldsmiths of the city who showed him great honour. In Bruges, after being received by Jan Provoost, Dürer was invited by Marx the goldsmith, who gave him a costly meal and asked many other goldsmiths to meet him.⁸⁸⁵ This delegation of Bruges goldsmiths took Dürer on a tour around the city, with stops at the emperor's house, St. James church and the Church of Our Lady where he saw Michelangelo's Madonna. The day was ended with a rich banquet in the guildhall of the guilds of Sts Luke and Eloy.

⁸⁷⁷ Roobaert 2015, vol 1, pp. 271-74.

⁸⁷⁸ Roobaert 2015, vol 2, pp. 38-50.

⁸⁷⁹ Rupprich 1956, vol. 1, p. 152, 169; Ashcroft 2017, vol. 1, p. 556.

⁸⁸⁰ Rombouts & Van Lierus 1864-76, vol. 1, p. 85. The Antwerp goldsmith is probably also identifiable as the Master Alexander who is mentioned in the often-cited 1542 Utrecht court case (see chapter 1.2). Pinchart also associated him with the anonymous medallist Alexander P.F., who in 1578 had cast a medal of the poet Jean Baptiste Houwaert who had worked at the English court of Henry VIII. Since this implies a minimum age of ninety, this seems rather unlikely. Alexander van Bruchsal was also identified as the anonymous Netherlandish engraver Master S. Glück 1926. On the reliability of this attribution, see Koch 1951, pp. 16-17; Van der Stock 1998, p. 196, n. 34.

⁸⁸¹ Rupprich 1956, vol. 1, p. 154; Ashcroft 2017, vol. 1, p. 559.

⁸⁸² Rupprich 1956, vol. 1, p. 169; Ashcroft 2017, vol. 1, p. 579.

⁸⁸³ Rupprich 1956, vol. 1, p. 170; Roobaert 2015, vol 1, p. 291; Ashcroft 2017, vol. 1, p. 581.

⁸⁸⁴ Roobaert 2005; Roobaert 2015, vol 2, pp. 285-86.

⁸⁸⁵ He was identified by Rupprich as the Bruges goldsmith Marc de Glasere (active 1516-1533), who would later work at the court of Margaret of Austria. Rupprich 1956, vol. 1, p. 168; Ashcroft 2017, vol. 1, p. 577.

Dürer showed his gratitude to the Netherlandish goldsmiths, not only by the distribution of his print series, but also by making a portrait of the above-mentioned Marx the goldsmith and Stephan Capello, jeweller and goldsmith working at the court of Margaret of Austria.⁸⁸⁶ The latter is sometimes identified as the goldsmith portrayed in the pen drawing with an inscription which reads “*ein goltschmit von Mechell zw antworff gemacht 1520*”.⁸⁸⁷ Although Dürer famously left the family tradition of his father’s goldsmith workshop behind him, his travel journal shows that he showed great respect to the goldsmiths in the Low Countries. Perhaps he had heard stories about the Netherlandish skills and prosperity of Netherlandish goldsmiths from his father. In his 1524 family chronicle, Dürer writes about how his father



Fig. 7.1. Albrecht Dürer the Elder, *Self-portrait*, 1484. Silverpoint, 28,4 x 21,2 cm. Vienna, Graphische Sammlung Albertina, inv. 4864. Photo: © Ertl Peter, Albertina Wien.

“spent a long time in the Netherlands learning from the great masters of his craft, and finally came to Nuremberg in the year 1455”.⁸⁸⁸ The personal professional pride of Dürer’s father as a goldsmith is shown by his self-portrait which he made in 1484 (fig. 7.1).⁸⁸⁹ Drawn in meticulous silverpoint, Albrecht Dürer the Elder proudly portrays himself as a goldsmith, holding a delicate golden statuette of a soldier or standard-bearer in his hand as a sign of his craft and skill. On this portrait, Joseph Koerner writes: “If this is the self-portrait of Dürer the Elder (...), self-portraiture does not emerge in Germany single-handedly in the art of Dürer the Younger, but rather is a practice shared by a Nuremberg goldsmith and his son”.⁸⁹⁰ Rather than simply being a trope in the Dürer family, the practice of portraiture and self-portraiture stems from a longer tradition in the goldsmith’s trade, which might even have been something Dürer’s father had picked up during his apprenticeship in the Low Countries, as we shall discuss in the following chapter.

⁸⁸⁶ Rupprich 1956, vol. 1, p. 162; Ashcroft 2017, vol. 1, p. 569.

⁸⁸⁷ Berlin, Kupferstichkabinett, Kdz 4009. Strauss 1974, vol. 4, p. 1920.

⁸⁸⁸ Rupprich 1956, vol. 1, p. 28; Ashcroft 2017, vol. 1, p. 31.

⁸⁸⁹ Vienna, Graphische Sammlung Albertina, inv. 4846. Strauss 1974, vol. 1, p. 10.

⁸⁹⁰ Koerner 1993, p. 43.

7.2. Representation and self-representation

The self-representation of experts in geometry such as architects, woodcarvers or goldsmiths offers a usable tool to create an image of their professional esteem and self-confidence. From the twelfth century onwards we find various representations of architects in stone, wood or bronze of the master of the works in church interiors.⁸⁹¹ One type which tells us about the social standing are the tomb slabs, which represent the depiction of a master mason, most often in combination with the compass as a recognisable professional attribute.⁸⁹² In some rare cases, only the architect's working tools are depicted. Such is the case with a thirteenth-century tombstone from the St Marcel Church in St Denis, near Paris, which simply uses the architect's tools to commemorate Master Guérin, the master builder of the church where he found his last resting place (fig. 7.2).⁸⁹³ Both tools of design and execution are being depicted as the tombstone is furnished with a plumb line, a ruler, a hammer and a mason's trowel, all centred around a cross.⁸⁹⁴ The identification of the architectural designer with his tools also occurs in many self-portraits of master masons which are to be found in Europe since the thirteenth century.⁸⁹⁵ Especially in Germany and



Fig. 7.2. Anonymous, *Tomb stone of Master Guérin*, 13th century. Paris, Musée Cluny, inv. 11789. Photo: © Author.

Bohemia, but also in France, it was not uncommon for master masons to finish a commission by including a self-portrait within the architectural framework which they designed (church interiors, archivolt, pulpits, choir stalls, rood screens, etc.). One of the earliest and best-known examples of this is the sculpted self-portraits which Peter Parler (1330-99) and Matthias of Arras (c. 1290-1352) included in the choir triforium of Prague's St Vitus Cathedral, thus putting themselves on par with the similar portraits on the same location of their ecclesiastical and royal commissioners.⁸⁹⁶ Much in the same tradition is the self-portrait of the Nuremberg sculptor Adam Kraft (†1508), in the sacrament

⁸⁹¹For an overview, see Severin 1992, pp. 17-24

⁸⁹² Severin 1992, nos. 3-27; Binding 2001; nos. 150, 240, 491, 500, 501. On German and French architect's signature and self-representation, see Burg 2007, pp. 208-58.

⁸⁹³ Paris, Musée de Cluny, inv. 11789; Severin 1992, no. 5; Binding 2001, no. 418.

⁸⁹⁴ Very similar in composition and iconography is a tombstone with the escutcheon of the Parler family in Ulm's Minster, which depicts two hammers beside a cross. Binding 2001, no. 569.

⁸⁹⁵ Severin 1992, nos. 34-73.

⁸⁹⁶ Severin 1992, nos. 61-62; Binding 2004; pp. 96-97.



Fig. 7.3. Adam Kraft and workshop, *Self-portrait on sacrament house*, 1494. Nuremberg, St Lorenz church. Photo: © Author.



Fig. 7.4. Anton Pilgram and workshop, *Self-portrait on organ loft*, 1510-15. Vienna, St Stephan's Cathedral. Photo: © Author.

house (1493-96) of the St Lorenz church.⁸⁹⁷ In a place traditionally reserved for saints or apostles, the micro-architectural structure is carried on the shoulders of two masons on both sides, with Kraft's self-portrait impertinently placed in the middle, at a scale close to life-size (fig. 7.3).⁸⁹⁸ Proudly dressed in the clothes of his trade, he portrayed himself holding his instruments of creation: the mallet and chisel. Kraft's self-representation is comparable to that of Anton Pilgram, the sculptor and master mason of the building lodge of Vienna's St Stephan's Cathedral. He incorporated two self-portraits into the micro-architecture. Once, he peers out of an illusionistic window, at the bottom of the pulpit with a compass in his hands.⁸⁹⁹ He appears a second time in an even bolder manner at the base of the organ loft (c. 1510-15), built into the cathedral's north wall (fig. 7.4). Pilgram makes an unequivocal statement about both his reputation and his geometrical knowledge. Instead of holding tools of manual labour as Kraft does, Pilgram holds a compass and a T-square: instruments of the intellectual designing process at the drawing table. It is also no coincidence that both times his head is placed underneath some complex geometrical structures; appearing at the base of a series of intricate,

⁸⁹⁷ Althaus & Stolz 1994; Klamt 1999; Baxandall 1980, p. 288.

⁸⁹⁸ Kraft's two workshop assistants or journeymen are also depicted kneeling at the base of the sacrament house. Klamt 1999; Timmermann 2009, pp. 144-52; Kavalier 2012, p. 173. In the Nurnberg context, mention should also be made of the prominent position of the self-portrait of brass-founder and architect Peter Visscher the Elder on the Sebaldus Shrine (1507-19) at St. Sebald.

⁸⁹⁹ Pilgram was most likely inspired by a similar sculptor's self-portrait at the base of the pulpit in Strasbourg Cathedral, designed by Hans Hammer in 1484.

intersecting squares, topped by the vaults.⁹⁰⁰ The entire structure is a showcase of the most intricate *modern* Gothic geometry of its time, which visually seems to sprout and blossom from the architect's mind as a sign of his ingenuity. Right below the sculptor's polychrome self-portrait, he has placed his mason's mark, so that there can be little doubt about his identity.

In the Low Countries far fewer examples of this professional and social self-awareness and self-promotion by architectural designers exist. The closest in comparison to the discussed German and Austrian examples of self-representation is perhaps the presence of craftsmen on Netherlandish choir stalls, such as the one in the church of St Catherine in Hoogstraten, which is often interpreted as a self-portrait of the local carpenter or wood carver Albrecht Gelmers (active 1532-48, fig. 7.5).⁹⁰¹ In Vilvoorde, the master mason of the church of Our-Lady, Adam Gheerijts (c. 1320/25-1394) was commemorated with an inscription on one of the four pillars in the crossing in 1384, which describes that he was the architect (*fundator*) of the church, and that a certain Obens was a stone cutter who stood under his supervision (fig. 7.6).⁹⁰² The recognition of the architect in such a visible place, was a clear sign of the public recognition of Gheerijts' abilities. Perhaps Gheerijts' social status was affected by working in a courtly context, having done several commissions for Johanna of Brabant (1322-1406) and later Filip the Bold (1342-1404).⁹⁰³ On his tombstone, placed in the same church in Vilvoorde, he is described as the mason of the Dukes of Brabant and Burgundy.⁹⁰⁴ Very comparable is the above-mentioned 1337 commemoration stone for Jacques Piccart in Aarschot.



Fig. 7.5. Albrecht Gelmers, *Self-portrait* (?), Choir stalls, 1532-48. Hoogstraten, St Catherine's church. Photo: © KIK-IRPA.

In line with the architectural representations in Vienna or Nuremberg self-representations is the acclaimed self-portrait of Nikolaus Gerhaert van Leyden (c. 1430-1473), dated 1463, originally part of the *Alte Kazlei* in Strasbourg (fig. 7.7).⁹⁰⁵ Although mostly active in Strasbourg, Trier and Vienna, the

⁹⁰⁰ Kavalier 2012, p. 175.

⁹⁰¹ Steppe 1973, p. 32; De Ceulaer 1988, p. 86; Theunissen 2017, pp. 58-65.

⁹⁰² 'Adam fundator Gheerijts huj erat. q̄ parator / Obens formarum sb eo fuerat varjarum / ac Braken egidio sb. jo Craembot. et h. Molomano / mille trecentenis sex x, et bis duodenis / Elizabet festo mater borum tu memor esto.'

⁹⁰³ Croon 2008; Geleyns & Smars 2009, p. 148.

⁹⁰⁴ 'Hier lieghet meester Adaem / Gheerijts miins beere maets van / Braba[n]t en m[iin]er vrouwe en mii[n]s beere van / Borghoeg[n]en die staerf int jaer / M.CCC.LX.[XXX] en IIII Den tinsten dach / van decembre bid godt over de ziele.' Contrary to other contemporary architects' tombstones, Gheerijts' grave does not show any iconographic references to his profession.

⁹⁰⁵ There is still discussion on the identification of the bust as a self-portrait. However, as convincingly argued by Hanns Hubach, the combination of the professional attribute of a compass in his left hand with the pensive melancholic pose, make the identification of the statue as the artists himself most plausible, see Hubach 2018.



Fig. 7.6. Anonymous, *Commeroration stone Adam Gheerijis*, 1384. Vilvoorde, Our-Lady church. Photo: © Author.

artist had originally been trained in a Netherlandish workshop.⁹⁰⁶ With great virtuosity, the sculptor and architect made his most personal and expressive work about himself and his melancholic study of the art of geometry, indicated by the (broken off) compass in his left hand.⁹⁰⁷

The Book of Hours commissioned by Loys van Boghem in 1526, now preserved in the Library of the *Groot Seminarie* in Bruges forms a vivid visual indication for the growing self-awareness of architects and their self-representation in the Low Countries.⁹⁰⁸ With its depiction of the *Four Crowded Martyrs*, patron saints of master masons and sculptors, on its frontispiece, the manuscript opens with a conscious statement of professional awareness (fig. 7.8). It is an iconographical motive uncommon to manuscript illumination and seems to have been specifically tailored to the commissioner's profession.⁹⁰⁹ Each saint can be seen holding an instrument of architectural design, the same attributes that we have seen in examples of architect's portraits and funeral monuments. They are a ruler, a compass, a carpenter's square, and a chisel. Significantly, the patron saints are located in a gilded, sculpted porch executed in the geometrically complex *modern* Gothic style for which Van Boghem was

⁹⁰⁶ On Gerhaert's Netherlandish origin, see Schreider 2004, with further literature.

⁹⁰⁷ The motif of the head resting on the hand, alluding to the melancholic temperament (or humor) of the creative artists has been extensively researched, see Wittkower & Wittkower 1963; Panofsky & Saxl 1964; Dixon 2013.

⁹⁰⁸ Lysen 1976; Hurx 2012, pp. 192-95; Ciavaldini Rivière 2014; Hurx 2018, pp. 200-201.

⁹⁰⁹ Ciavaldini Rivière 2014, p. 142.

so well-known, akin to that of St. Nicolas-de-Tolentino at Brou (1513-1532).⁹¹⁰ The bottom of the ornamental niche is provided with a small escutcheon with Lodewijk van Boghem's intertwined initials Lb.⁹¹¹ Stressing the architectural profession even more, is the elaborate display of tools of architectural design and execution on the adjacent folio: various types of chisel, pickaxe, a hammer, a trowel, a mason's square, a compass, a measuring rod and a plumb rule are all displayed in the margin decorations, much in the same manner as the *Arma Christi* are displayed in a later folio in the manuscript (fol. 142). On various pages in the manuscript, the illuminator(s) included the initials, heraldry and motto (IVSQVE A LA FIN) of both Lodewijk van Boghem, his wife Anna and his son François.⁹¹² As an additional sign of his social prestige and ambitions as a social climber, these initials are in the form of playful intertwined letters in imitation of cords and knots, as was common for

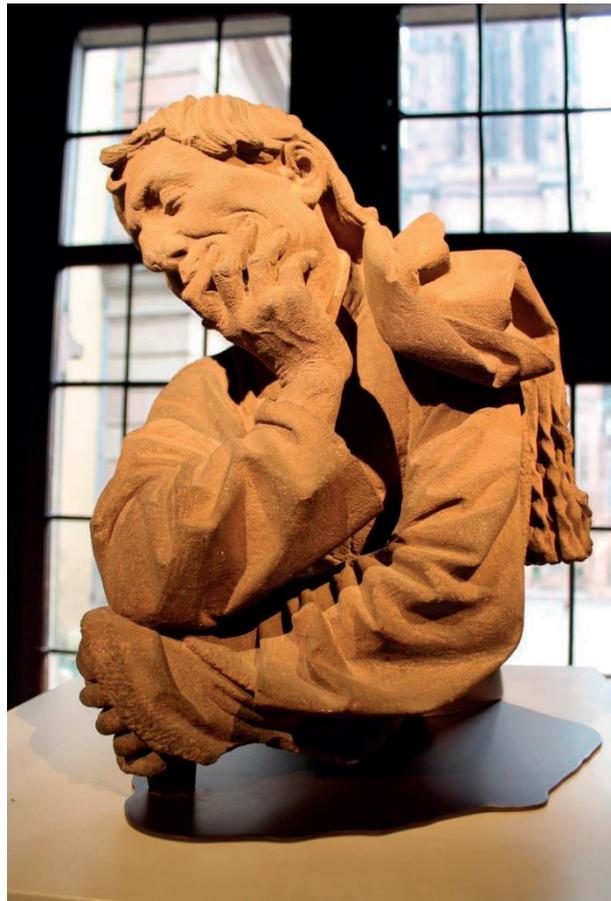


Fig. 7.7. Nikolaus Gerhaerdt van Leyden, *Self-Portrait* (?), 1463. Strasbourg, Musée de l'oeuvre de Notre-Dame, inv. MOND 165. Photo: © Author.

the high Habsburg nobility, in particular with the initials of Margaret of Austria and her late husband Philibert de Savoy at the latter's burial church in Brou, or the tomb of Ferry de Gros in St James in Bruges (1544).⁹¹³ The architectural frames, nine in the *modern* Gothic style and eight in the Antique manner, which surround the miniatures showcase the most novel inventions as an indication of the artist's stylistic versatility. The idiosyncratic style of these illuminations and the way they have been drafted as architectural drawings, has led several authors to suspect Van Boghem's active involvement in the design of these miniatures.⁹¹⁴ By commissioning this book of hours in Lyon, Van Boghem placed himself within the social order of those able to commission such luxurious and richly illustrated works of art, such as members of the court, clerics and wealthy merchants.⁹¹⁵ Van Boghem's book of hours

⁹¹⁰ On architectural ornament in the Book of Hours, see Ciavaldini Rivière 2014, pp. 108-29.

⁹¹¹ Mély 1913, p. 8; Ciavaldini Rivière 2014, p. 79.

⁹¹² Ciavaldini Rivière 2014, pp. 79-81.

⁹¹³ Hurx 2018, p. 201.

⁹¹⁴ Mély, 1913; Leysen 1976, pp. 211-12; Ciavaldini Rivière 2014, pp. 150-58, 193-99. This idea has been rejected by Callewaert 1910; Duverger 1923; Fransolet 1930.

⁹¹⁵ On the clientele for illustrated manuscripts, see Smeyers 1998, pp. 434-65; Van Hoorebeeck 2014.

was a very private commission, of personal value to him and his family, but it was also a sign of how he wished to be remembered in posterity; as noble designer of the Antique and *modern* Gothic style, gifted with profound knowledge of geometrical design principles.



Fig. 7.8. Anonymous illuminator, *The Four Crowned Martyrs in the Book of Hours of Lodewijk van Bogenhem*, Fols. 1v and 2 r. Lyon 1526-30. Bruges, Groot Seminarie. Photo: © Author.



Fig. 7.9. Jan Cornelisz. Vermeyen (attrib., *Portrait of an architect*, ca. 1520-1530. Oil on panel, 53 x 43 cm. Berlin, Staatliche Museen zu Berlin, Gemäldegalerie, inv. 629A. Photo: © author.

A more public representation of the architect in the Low Countries is the portrait of an architect, dated c. 1530 (fig. 7.9).⁹¹⁶ Although traditionally attributed to Ludger Tom Ring the Elder of Münster (1496-1547), the portrait has been similarly attributed to a Netherlandish artist active in the environment of Jan van Scorel or Jan Cornelisz. Vermeyen.⁹¹⁷ Both the style and the typical hand gestures seem to be reminiscent of the qualitative portrait production of the latter.⁹¹⁸ If this attribution is correct, the portrait would have to have been of a high-ranking architect working in the Low Countries during the first quarter of the century. The sitter can be seen wearing a luxurious cloak and a cap fashionable in the 1520s and 1530s. In his left hand, he can be seen holding a compass as professional marker, while his right hand makes a gesture as if giving

instructions. Additional to the compass, the sober room in the background includes a graduated ruler and a collection of two mason's templates (*berderen*).⁹¹⁹ Apart from its convincing style, the attribution of the portrait to Vermeylen would be also supported by the fact that the painter belonged to a close network of painters with a clear interest and understanding of geometrical and architectural principles, who applied it in cartographic and architectural projects (see chapter 4.5). Given that Vermeyen was also court painter to Margaret of Austria, he would have been able to meet prominent architects working for the same court such as Rombout II Keldermans or Lodewijk van Boghem. The portrait should be considered within the context of a rising new genre of architect's portraits, starting in Germany in the 1450's.⁹²⁰ Valuable examples of architects having their portraits made by renowned artists are the drawing which Hans Holbein the Elder made of Mathes Roriczer, or Albrecht Dürer's depiction of a certain Hieronymus of Augsburg, architect of the Fondaco dei Tedeschi in Venice (fig. 7.10).⁹²¹ These portraits show their subjects as experts in geometry and should be considered within the same social realm of other portraits of professionals in the Liberal arts such as Hans Holbein the Younger's famous portrait of the German mathematician and astronomer Nicolaus Kratzer (1487-

⁹¹⁶ Berlin, Staatliche Museen zu Berlin, Gemäldegalerie, inv. 629A.

⁹¹⁷ Bock 1975, pp. 359-61; Guerreau 2012, pp. 986-87.

⁹¹⁸ Horn 1989.

⁹¹⁹ Hurx 2018, p. 269.

⁹²⁰ Severin 1992, pp. 37-45, 185-92.

⁹²¹ Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. KdZ 2274. Strauss 1974, vol. 1, no. 93; Anzelewsky & Mielke 1984, no.52.

1550) in 1528.⁹²² Both professions are depicted with the compass as a signifier of their intellect and mastering of an aspect of the quadrivium.

A similar social distinction is apparent in the prominent position held by goldsmiths in early Netherlandish portraiture. In 1436, the same year in which Jan van Eyck was finishing his commission for canon Joris Van der Paele, the Bruges goldsmith Jan de Leeuw approached the Burgundian court painter for his portrait.⁹²³ The thirty-five-year-old goldsmith shows his craftsmanship by proudly presenting a golden ring to the viewer. With its imitation of a brass or bronze frame, and the chiselled trompe-l'oeil inscriptions Van Eyck equally seems to refer to the professional identity of the sitter. The fact that a goldsmith was able to commission his portrait by the official court painter of Philip the Good sent a

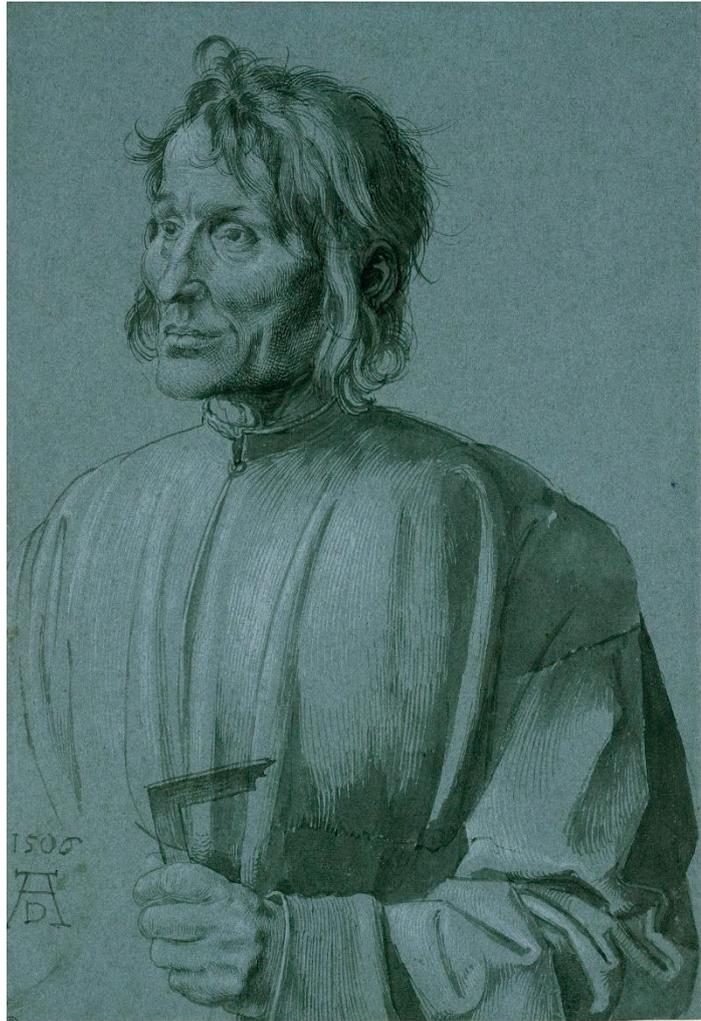


Fig. 7.10. Albrecht Dürer, *Portrait of the Architect Hieronymus of Augsburg*, 1506. Brush and black ink with white highlights, on blue Venetian paper, 39,1 x

clear message about the sitter's social status. At a time when only members of the Burgundian court, the top-layers of the ecclesiastic elite and wealthy merchants were financially able and socially allowed to be portrayed, goldsmiths were probably the first manual craftsmen to represent themselves by the most renowned painters of their generation.⁹²⁴ Jan de Leeuw was among the most prosperous goldsmiths in Bruges and would hold the position of governor of the guild of St Eloy in 1454.⁹²⁵ Continuing this tradition of goldsmith portraits is Petrus Christus' 1449 *Portrait of a goldsmith in his workshop*. Van der Velden convincingly identified the depicted goldsmith as the wealthy Bruges goldsmith Willem van Vlueten (active 1432-1462). With its elaborate display of jewellery, gems, and

⁹²² Paris, Musée du Louvre, inv. 1343.

⁹²³ Vienna, Kunsthistorisches Museum, inv. 946.

⁹²⁴ On goldsmith's portraits in the Low Countries, see Van der Velden 1998, pp. 261-69; Silver 2015, pp. 6-7. On Early Netherlandish portraiture, see Kathke 1997, pp. 59-88; Campbell 1998; Borchert 2012b, p. 220; Borchert 2013.

⁹²⁵ Viaene 1969, p. 68.

precious metals the portrait offers an unsurpassed impression of the wealth and social standing of the goldsmith's workshop. Interestingly the panel also represents the visit of a couple dressed in the Burgundian courtly fashion, which underlines the high social entourage of the goldsmith.⁹²⁶ This composition is slightly echoed in the illuminated dedication manuscript that Jean Lemaire gave to Margaret of Austria in 1505, which equally presents a glimpse into a workshop of the allegorical goldsmith named Merit (fig. 7. 11). The goldsmith is visited in his workshop by Noble Thought, sent there by King Honor.⁹²⁷ Be it in a more allegorized context, here to a well-to-do goldsmith with many shop assistants receive a courtly commission from the castle seen in the left background. The portraits by Jan van Eyck and Petrus Christus clearly set the tone for a long tradition of goldsmith portraits in the Low Countries reaching far into the sixteenth century, often executed by the most fashionable and renowned portraitists of their times.⁹²⁸



Fig. 7.11. Anonymous illuminator, *Noble Penser enters the workshop of goldsmith Mérite*, 1504-05. Watercolour on vellum. Vienna, Österreichische Nationalbibliothek, MS 3441, fol. 32v. Photo: © from Eichberger 2018, p. 244.



Fig. 7.12. Alexander von Bruchsal, *Self-portrait*, ca. 1520. Bronze medal, 4,53 cm diameter. Washington DC, The National Gallery of Art, Samuel H. Kress Collection, inv. 1957.14.1181. Photo: © National Gallery Washington.

Although the above-described portraits may have had a very private use, goldsmiths also made visual public statements about their position and craftsmanship. A rare example of this phenomenon from the Low Countries is a bronze medal by the above-mentioned Alexander von Bruchsal (c. 1480-1545).⁹²⁹ He migrated from Bruchsal (Bader-Württemberg, not Brabant) to Antwerp in 1505 and had a flourishing career as a goldsmith and medallist.⁹³⁰ In 1514 he owned several properties in Antwerp and seems also to have functioned as estate agent. From 1527 onwards, he held the position of dean of the Antwerp goldsmiths' guild.⁹³¹ It is in this prestigious position, in 1529,

⁹²⁶ The woman visiting the workshop has been identified as Mary of Guelders. Van der Velden 1998, p. 261-62.

⁹²⁷ Vienna, Österreichische Nationalbibliothek, Ms 3441. Debae 1987, no. 14; Eichberger 2018, p. 243.

⁹²⁸ E.g., Gerard David, *Portrait of a Goldsmith*, ca. 1495-1500, Vienna, Gemäldegalerie, inv. 970; Quinten Metsys, *The Moneylender and his Wife*, 1514, Paris, Musée du Louvre, inv. 1444.

⁹²⁹ Washington, National Gallery of Art, Samuel H. Kress Collection, inv. 1957.14.1181; Hill & Pollard 1967, p. 110, no. 586.

⁹³⁰ Hill & Tourneur 1924.

⁹³¹ *Ibid.*, doc. 9.

that the goldsmith cast his medal, which conceitedly shows him in profile in accordance to new humanist fashions (fig. 7.12). The medal was a public statement of the goldsmiths' wealth, professional identity and craftsmanship. Portrait medals like these were shared among colleagues or friends and quite rapidly also collected by the humanist nobility as a demonstration of a new-found self-awareness and the shaping of canons of great identities.⁹³² Like portraiture itself, goldsmiths and architectural designers were probably the first to use this medium to contribute to their own fame as artistic personalities, with portrait medals of Leon Battista Alberti, Pisanello and Filarete as best-known early examples.⁹³³

Since many goldsmiths combined their craft with the production of figurative printmaking, they used the new medium to represent themselves in their goldsmith trade. Dated between 1480 and 1490, Israhel van Meckenem depicts himself with his wife Ida, as is indicated in the Latin inscription at the bottom of the print, which states "*figuracio facterum Israehelis et Ida suis uxoris IVM*" (fig. 7.13).⁹³⁴ The couple is portrayed against a textile background with floral motives, not unlike those on the ornament prints which the goldsmith-engraver published. Despite the limited amount of space given to the couple's bodies, it is clear that Ida is wearing a fur-trimmed gown or jacket, a symbol of their prosperity.⁹³⁵ Other than panel portraits or drawings which were to be admired in a private circle of the private dwelling, this engraving seems to have functioned as a calling card showcasing his abilities as an engraver to a literate and educated audience versed in Latin. Despite his present fame as a



Fig. 7.13. Israhel van Meckenem, *Double portrait of Israhel van Meckenem and his wife Ida*, ca. 1490. Engraving, 12,4 x 17,3 cm. London, The British Museum, inv. E,1.94. Photo: © British Museum.

⁹³² Scher 1994, pp. 13-30; Klinger Alec 1998.

⁹³³ Severin 1992, pp. 24-28.

⁹³⁴ Lehrs 1908-34, IX, p. 1; Landau & Parshall 1994, p. 57.

⁹³⁵ A similar gown is worn by Elizabeth Donne in Hans Memling's *Donne Triptych* (1478). London 2008, p. 184, no. 49.

pioneering engraver, Van Meckenem seems to have considered himself first and foremost a goldsmith and promoted himself in this manner. In a print depicting a bearded man wearing an oriental turban, he proudly states at the bottom of the print “Israel van Meckenem Goldschmied”, again serving as a professional calling card of his skill as a goldsmith.⁹³⁶ Similarly the German goldsmith-engraver, Telman van Wesel’s engraving of the *Virgin and Child on the Crescent moon*, copied after Dürer, displays at the bottom of the print the artist’s name, the address of his workshop and the stipulation that he is a ‘goldsmith or prints-cutter’ (*goltsmit of Prentesnier*) (fig. 7.14).⁹³⁷

The fact that both Van Meckenem and van Wesel clearly stressed on their prints their profession as a goldsmith is a continuation of the professional pride common to the goldsmith trade and architectural designers for at least a century. Other such signs to highlight geometrical knowledge and a background in architectural design were the use of workman’s tools and house marks, which frequently reoccur as a signature in early prints and painting. In the next chapter we shall explore how the manner of signing works of art was transmitted from professions related to architectural design to the new medium of printed images and eventually also to painting, as a consequence of the phenomenon that more architectural designers were involved in these professions.



Fig. 7.14. Telman van Wesel (After Albrecht Dürer), *Virgin and Child on the Crescent moon*, ca. 1500-10. Engraving, 11,4 x 7,3 cm. London, The British Museum, inv. 1868, 1114.82. Photo: © British Museum.

⁹³⁶ Lehrs 1908-34, IX, p. 5; German Hollstein 1986, vol. 24, no. 1.

⁹³⁷ The Illustrated Bartsch, vol. 9, no. 5.

8. Mark(et)ing Expertise: The use of housemarks and tools as forms of social distinction

During the fifteenth century it was still uncommon for Netherlandish painters to sign their work.⁹³⁸ Only by the early sixteenth century signing one's paintings gradually became a more common practice by Netherlandish painters both working in urban and courtly centres.⁹³⁹ Nevertheless, signing artistic production was a practice shared by the group which we have previously identified as architectural designers: masons, sculptors, gold- and silversmiths, cabinetmakers, or woodcarvers. The usage of marks was not restricted to craftsmen, as the combination of angular lines was commonly used as a manner of signing documents. They were used as identification on tomb slabs, official documents, but could also be to mark crates, barrels, and packages by merchants. The reasons for placing marks on works of artistic productions could vary and were initially for practical and economic reasons, rather than just signs of an artistic self-awareness of involved artist. In the production of carved retables, hallmarks of the involved guilds (joiners, carpenters, and painters) were systematically applied in Brussels, Antwerp and Mechelen from the second half of the fifteenth century.⁹⁴⁰ They acted specifically as quality guarantees of the guilds to the market. In some cases cabinetmakers or sculptors, such as Jan Borman, included a personal mark, but they were a requirement by the guild rules.⁹⁴¹ Gold- and silversmiths were also required to include several marks on their finished product. In Antwerp, for example, the guild of St Luke specified that a finished product sold on the market should contain both the city hallmark, the year of production and the individual mark of the master goldsmith.⁹⁴² The mark was to be registered by the guild's dean and was either a combination of straight lines, or a monogram.⁹⁴³ In the building trade, personal mason marks were often placed upon prepared and finished stones as a way for the building administration to pay the mason his wages, based on his daily

⁹³⁸ Within the large corpus of fifteenth-century Netherlandish painting, only five instances are recorded of authenticated works by means of a signature. The most familiar exception is Jan Van Eyck, who included the phrase "*Jobannes de Eyck Fuit Hic*" in the *Arnolfini Double Portrait* and several portraits carry his personal motto "*Als ich can*", most famously on the frame of the *Man in the red turban*, possibly his self-portrait. The main reason for his signatures was probably due to the exceptional courtly context in which he was working, see Künstler 1972, pp. 114-15; Keller 1981, p.217; Gludovatz 2005; Bredekamp 2013. Yet, Van Eyck's likely familiarity with Pliny's appraisal of painting as a liberal art and the Bruges' painter's knowledge of geometrical principles might suggest a novel self-aware approach towards the artist. On this interpretation, see Martens 2020. Other fifteenth-century Netherlandish painters who signed their work were Petrus Christus, Hans Memling, Jheronimus Bosch and Colijn de Coter, see Folie 1963; Burg 2007, pp. 382-416.

⁹³⁹ Burg 2007, pp. 421-41; Suykerbuyk 2013, pp. 19-62. Although the Bruges guild of St Luke stipulated in 1427 that the illuminators should sign their miniatures with a small mark, the protectionist measure against foreign import proved to be ineffective since the law had to be reconfirmed by 1457, see Smeyers & Cardon 1990.

⁹⁴⁰ Crab 1977, pp. 49-55; Nieuwdorp 1981; Jacobs 1998, 230-38; Woods 2007, pp. 7-9.

⁹⁴¹ Fabri 1990; Serck-Dewaide 1998; Woods 2007, p. 9. Only in 1564 the regulations of the Mechelen carpenters' guild specified that carvers should add their personal mark in addition to the city's hallmark, see Mechelen 2000, p. 54.

⁹⁴² Schlugheit 1969, pp. 13-16; Antwerp 1988, pp. 26-27.

⁹⁴³ On goldsmiths' hallmarks in general, see Rosenberg 1922.

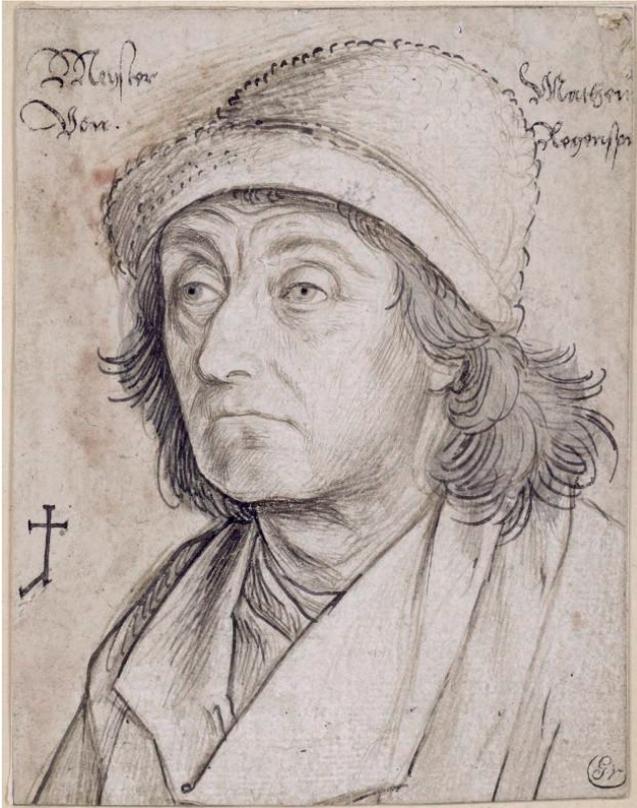


Fig. 8.1. Hans Holbein the Elder, *Portrait of Mathes Roriczer*, ca. 1490. Pen and black ink, with grey and brown wash, 12,4 x 9,4 cm. Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. KdZ 5008. Photo: © Jörg P. Anders, Staatliche Museen zu Berlin.

production.⁹⁴⁴ Aside from the financial aspect, the placing of the marks also provided a proficient means of quality control. Although the shape of mason's marks is mostly restricted to a combination of horizontal, vertical and diagonal lines, these hallmarks also took the shape of letters, monograms or masons' tools such as a hammer, trowel or mason's square.⁹⁴⁵ Individual masons' marks are not to be confused with other marks on the building site, such as position marks, which were placement instructions made on the stone blocks prepared in the quarries.⁹⁴⁶ Other individual marks are those placed by the stone merchants.⁹⁴⁷ By the late thirteenth century personal marks are sometimes used on an escutcheon or in combination with a portrait bust of the master mason as a sign of individual and professional pride. Although

most examples stem from Germany, a rare and rather modest example of this practice occurs in the church of Kampen (Buitenkerk), where a mason's mark and a trowel, enclosed by a small escutcheon can be found on one of the columns in the nave.⁹⁴⁸ Other such marks within heraldic shields have been found in Dordrecht, Nijmegen and Delden.⁹⁴⁹ Although house marks were not exclusively used by architects or goldsmiths, by the late fifteenth-century they had become a signifier of technical expertise in the arts and the social standing that was associated with it. In this context, it is relevant to mention that of the 151 known portrait drawings attributed to Hans Holbein the Elder (1460-1524), there are only two drawings to include a house mark. Both were portrait drawings made for well-known contemporary architects working in or around Augsburg, including Mathes Roriczer (fig. 8.1).⁹⁵⁰ The commission of a portrait by the Regensburg architect from one of the most prominent German

⁹⁴⁴ Janse & De Vries 1991, pp. 49-51.

⁹⁴⁵ Van Tyghem 1966, vol. 1, p. 103; de Smidt 1974, p. 43; Van Belle 1990, p. 35.

⁹⁴⁶ Bianchi 1997; Hurx 2018, pp. 164-65.

⁹⁴⁷ Van Belle 1990, p. 32; Hurx 2018, p. 370.

⁹⁴⁸ Janse & De Vries 1991, pp. 62-63.

⁹⁴⁹ *Ibid.*

⁹⁵⁰ Lieb & Strange 1960, pp. 90-114; Severin 1992, pp. 42-43, nos. 106 and 107. Holbein equally included a house mark in the portrait drawing of Burghard Engelberg (1445/1450-1512), an architect working in Augsburg, Ulm and Bozen. On Burghard Engelberg, see Bischoff 1999; Binding 2004, p. 117.

artists of his generation recalls the earlier-mentioned cases of fifteenth-century Netherlandish goldsmith portraits. The prominence of the cross-shaped house mark leaves no doubt about the significance of these marks not merely as an indicator of the sitter's identity but also of his professional status as a self-aware architectural designer.⁹⁵¹

8.1.Marks & Tools in Printed Media

As a number of goldsmiths from the eastern Low Countries and the upper and lower Rhineland shifted towards printmaking (see Chapter 6) they did not only transmit their geometrical knowledge and design abilities through the printed media, but equally carried over their signing method as a signifier of their geometrical background. All three earlier discussed early engravers, Alart Du Hameel, Master W and Johan van den Mijnnesten made consistent use of their house mark in their printed work as personal sign of identification and self-marketing.

Johan van den Mijnnesten's monogram IAM is perhaps the most tangible evidence of the transfer of goldsmiths' and architects' signing methods to other media, since the mark appears both on signed contracts as on the Bentheimer stone which the family imported into Zwolle.⁹⁵² This practice of placing the mark in between two letters, accords with a signing practice used more commonly in Germany. The best comparable example is perhaps Martin Schongauer who consistently signed all his 115 known prints at the bottom of the page with his initials "M S", separated by a cross. The latter seems to have been the family house mark since his brother, the goldsmith-engraver Ludwig Schongauer (c. 1450-1494) used an identical cross between his initials on his more moderate printed oeuvre.⁹⁵³ Van den Mijnnesten's prints are signed with the name of the city Zwolle, akin to the goldsmith's marking practice.⁹⁵⁴ The signature is also accompanied by a small tool, which has been interpreted either as a metal drill or a burnisher. This is consistent both with a traditional local signature practice in goldsmith and architectural workshops, as with a wider contemporary European signing practice. Both Swiss goldsmith-engravers Urs Graf (c. 1485-1528) and Niklaus Manuel Deutsch (c. 1484-1530) for instance, used a knife or dagger in combination with their initials to sign the majority

⁹⁵¹ Berlin, Staatliche Museen zu Berlin, Kupferstichkabinett, inv. Kdz. 5008. Lieb & Strange 1960, p. 90, no. 150.

⁹⁵² Dubbe 1970, pp. 55-57.

⁹⁵³ In the monogram on Schongauer's earlier engravings, the verticals of the M are parallel, and the S is punched, like a goldsmith's hallmark rather than engraved, see Koreny 1993; Kemperdick 2004, pp. 31-33; Burg 2013, pp. 284-85. Other comparable examples of early engravers who placed a house mark between their initials are Master BxR or Veit Stoss.

⁹⁵⁴ Dresden 2013, pp. 86-87.

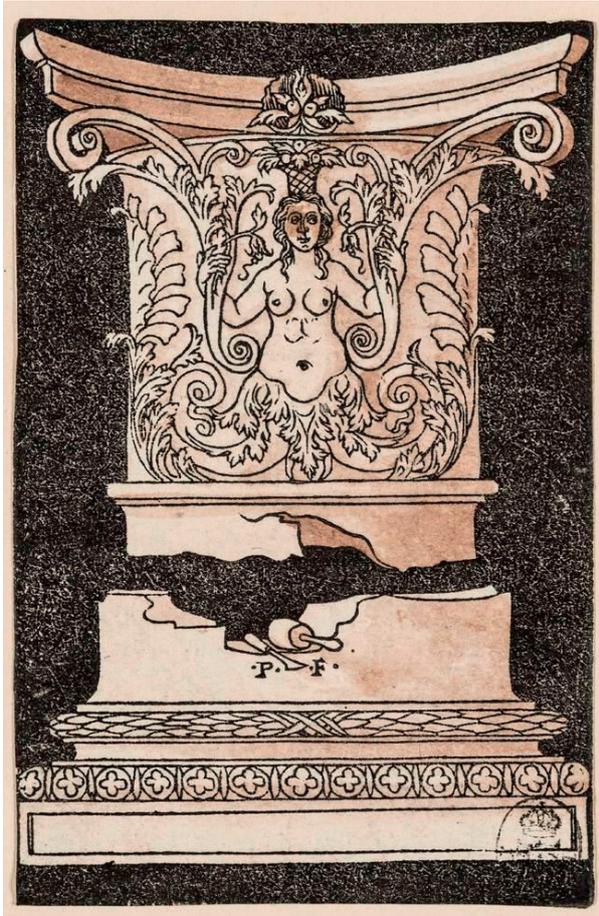


Fig. 8.2. Peter Flötner, *Corinthian capital and base*, ca. 1530-40. Woodcut on black ground, 11,5 x 7,5 cm. Dresden, Kupferstichkabinett, inv. 3504. Photo: © Kupferstichkabinett Dresden.

of their prints and drawings.⁹⁵⁵ Peter Flötner (1486-1546) often included a chisel and mallet in his prints and drawings, showing that he considered himself primarily a sculptor and furniture maker (fig. 8.2).⁹⁵⁶

The majority of Alart Du Hameel's prints, such as the Gothic baldachin, are signed using his surname (Hameel) in Gothic lettering followed by a cross-shaped house mark and the capital letter A (fig. 8.3).⁹⁵⁷ In some cases, the word "Bosche" is added to the prints, as reference to the city where he had his workshop, at least between 1478 and 1494.⁹⁵⁸ A mark which combines the individual name of its maker with that of an official city mark recalls the earlier mentioned standard signing practice used by silver- and goldsmiths in many Netherlandish cities, including 's-Hertogenbosch. When the goldsmiths' guild was founded 1503, its regulations specified that every object should carry a master's mark, the production year and a city mark.⁹⁵⁹ Comparable to Du Hameel's signing

method was a fellow townsman and contemporary printmaker who signed his engravings by BOS, combined with the figure of a knife (fig. 8.4).⁹⁶⁰ The knife in this signature has the same function as the house mark does in Du Hameel's prints, or the little burnishing tool in Van den Mijnesten's prints, given that master masons and goldsmiths were at liberty to sign either with a traditional angular house mark or a tool. The engraver was identified by Jos

⁹⁵⁵ Rowlands 1988, pp. 215-19; Washington 1999, pp. 311-43.

⁹⁵⁶ Rowlands 1988, pp. 124-26.

⁹⁵⁷ Gerlach 1970a.

⁹⁵⁸ In older literature this is often seen as a sign of collaboration between Jheronimus Bosch and Du Hameel. Despite some clear stylistic influence in the prints by Du Hameel, e.g. in *The Lovers with a Fool by a Fountain*, *The Last Judgement of the War Elephant*, the signature merely refers to the place of production, as also Jheronimus Bosch's (Jan van Aken) signature itself refers to the city. Not all Du Hameel's prints are signed with the city mark, such as the *Gothic Baldachin* or the *Apostle Peter*, possibly because they were associated with his time working in Leuven or Antwerp, see Dresden 2013, pp. 94-96.

⁹⁵⁹ Koldewey 1990, p. 469.

⁹⁶⁰ Hollstein 1947-2020, vol. 12, no. 2.

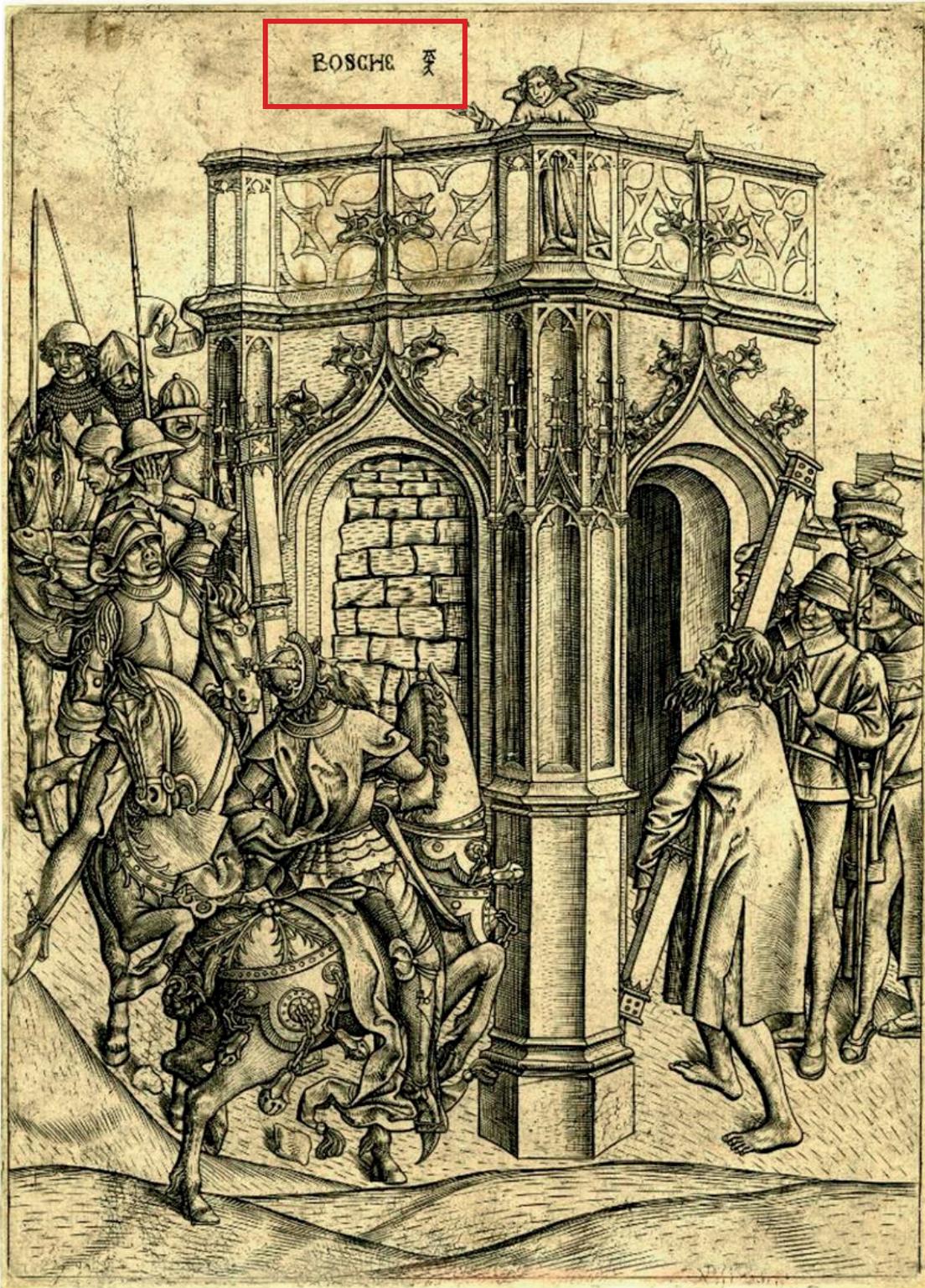


Fig. 8.3. Alart Du Hameel, *Emperor Heraclius carries the Holy Cross in the Gates of Jerusalem*, ca. 1478-1505. Engraving, 26 x 18,6 cm. Dresden, Kupferstichkabinett, inv. DG1928/525. Photo: © Kupferstichkabinett Dresden.

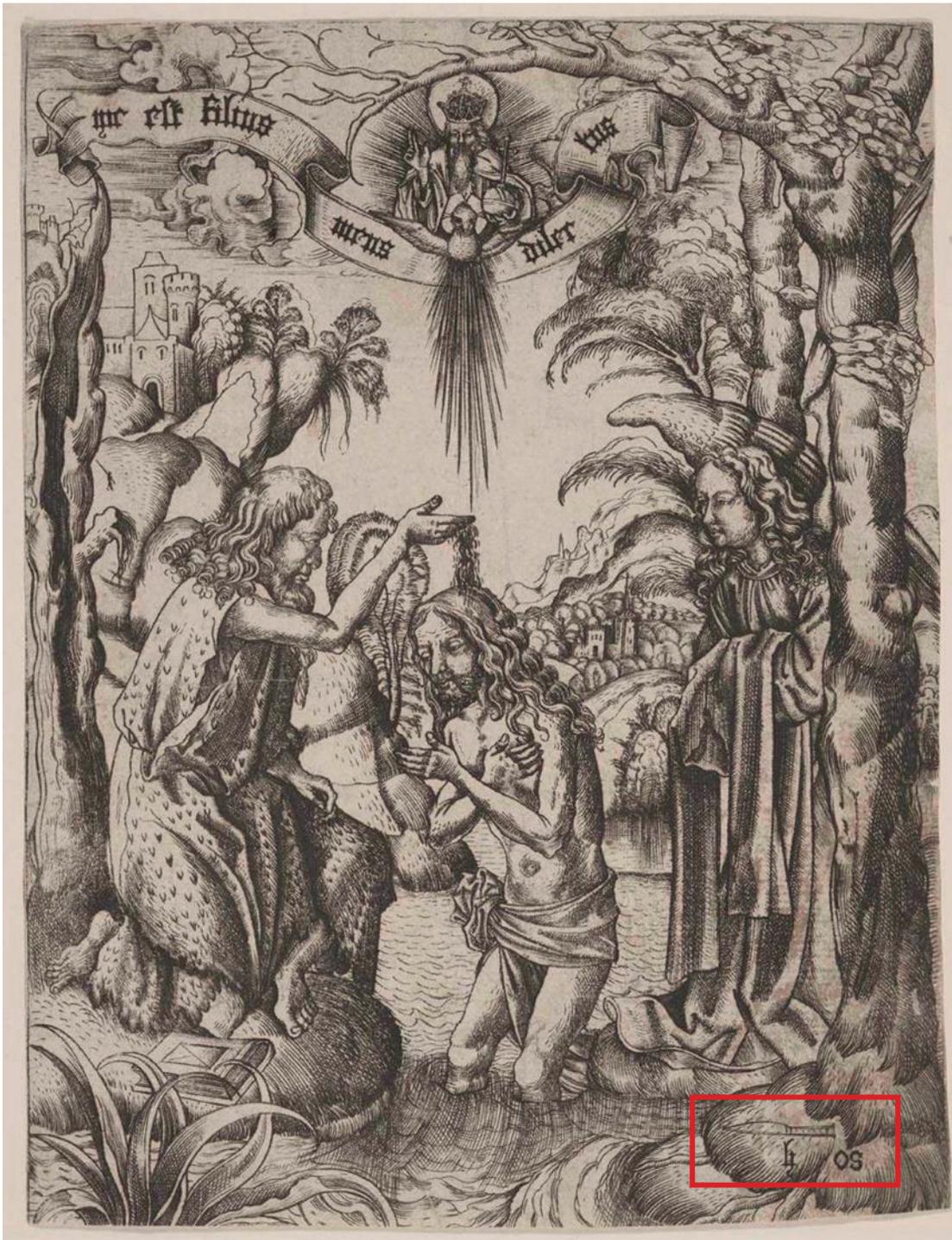


Fig. 8.4. Anonymous, *The Baptism of Christ*, ca. 1480. Engraving, 15,8 x 12 cm. Boston, Museum of Fine Arts, inv. M27575. Photo: © Museum of Fine Arts Boston.

Koldeweij as the goldsmith Michiel van Gemert (fl. 1475-1525), active as an engraver of knives.⁹⁶¹ In this particular case, the knife in the signature can be interpreted both as personal mark as well as a city mark, since knives were a well-known export product of 's-Hertogenbosch, a fact which was even mentioned by Guicciardini.⁹⁶² The signing method in one particular print in Du Hameel's oeuvre, the *Monstrance*, is significantly different from that of his other engravings (fig. 8.5). Even more than in any of his other prints, Du Hameel made an effort to market himself as an artist and 's-Hertogenbosch as the *Genius Loci*. At the base of the richly decorated monstrance, Du Hameel has inscribed the city's name S'HERTOGEN.BOSCHE in capitals and in full, so not merely the more common abbreviated form "*Bosche*". Something similar occurs with the signature of his own name at the top of the three-plate engraving, where he signs the engraving with "*Alart.Du.Hameel*", in Gothic lettering. While other engravings may carry either his surname or house mark, none are so unambiguously signed with first and last name of the designer. As recently noticed by Marisa Bass, Du Hameel's self-representation in this print goes yet even further. On a curling banderol around the pillar base at the left-hand side of engraved piece of the precious gold ware, Du Hameel took the opportunity to include his personal motto: "*Non Desino*", I will not cease.⁹⁶³ Yet, Du Hameel's self-marketing does not end there. Interestingly, the geometric diagram at the very bottom of the page includes Du Hameel's familiar house mark and the capital A (fig. 8.6). The addition of this extra signature is superfluous, given that the print was already elaborately signed at the top of the page. The architect-engraver here makes a strong statement of not being inventor of the monstrance but also of the geometry design behind it. The specific house mark functions as an indicator of his knowledge of the liberal art of geometry and his life-long experience and ingenuity as an architect. Using his motto and house mark Du Hameel intended to promote himself as a noble expert of one of the most highly demanded '*modern*' interpretations of the Gothic style. Marketing oneself as inventor of complex geometrical and characteristic forms, was a proven marketing strategy in the Low Countries. Other successful contemporary architects such as Rombout II Keldermans were equally using easily-recognizable idiosyncratic geometrical ornaments, such as the bell-shape ornament, as a personal identifier and ornamental trademark in their architectural design.⁹⁶⁴ As explored in the previous chapter, considering the exceptional size of Du Hameel's monstrance engraving, the print may have been aimed at an exclusive segment of the print market of wealthy collectors with a keen humanist interest in geometry and its Neoplatonist interpretation. On a more modest scale, Du Hameel similarly placed his house

⁹⁶¹ Koldeweij 2001, pp. 47-51.

⁹⁶² Guicciardini 1581, p. 185. I have used the augmented Italian edition, published by Plantin.

⁹⁶³ Bass 2015, p. 24. This recalls the self-assurance of a court-artist such as Jan Van Eyck, who included his personal motto on portrait frames.

⁹⁶⁴ Kavalier 2000; Kavalier 2012, pp. 91-96.

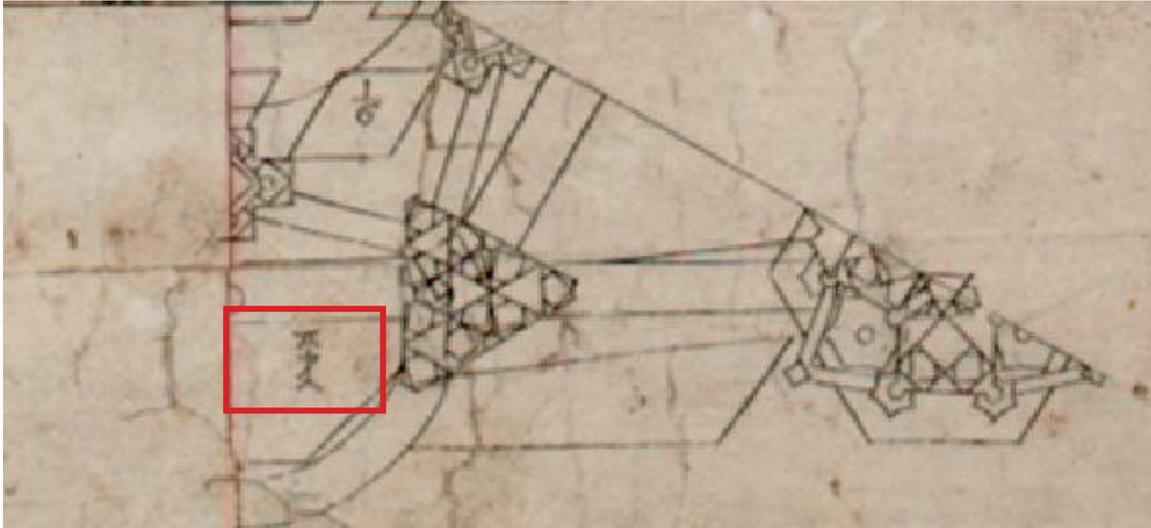


Fig. 8.6. Alart Du Hameel, *Design for a Monstrance* (geometric diagram), ca. 1479-1495. Engraving, 111,3 x 15,3 cm. Vienna, Graphische Sammlung Albertina, inv. DG1928/528. Photo: © Albertina Wien.

The phenomenon of taking pride in geometrical design abilities through the strategic placement of a signature can also be found in the prints of Master W. The symbol following the W can only be interpreted as the artist's house mark, whose name likely started with a W.⁹⁶⁵ In both of his designs for rose windows (figs. 6.7 and 6.8), the engraver consciously placed his letter and house mark not only at the heart of the rose, but also on both sides of the dot. The compass dot is the symbolic and physical origin of the design as it is the starting point for drawing the first circle of the rose window design. Both in Platonic philosophy and contemporary theological texts, the circle is the geometrical form most commonly associated with divine perfection and creation.⁹⁶⁶ In his *Timaeus*, Plato explains how “*He wrought it [the universe] into a round shape of a sphere, equidistant in all directions from the centre to the extremities which of all shapes is the most perfect and the most self-similar.*”⁹⁶⁷ Following other theologians and scholastics such as Augustine and Boethius who incorporated this Platonic idea into a Christian world view, Nicolas de Cusa defended the perfection of the circle as sign of divinity and the cosmos in general: “*God is a circle with its centre everywhere and circumference nowhere (...), Christ is the centre of a circumferences.*”⁹⁶⁸ The placing of the signature immediately at the circle's genesis is a statement of Master W about his own geometrical ingenuity and his mastering of the tools of creations itself, on the highest thinkable level. At its core, this self-conscious placement of the signature is a modest prelude to the statement which that other geometrically skilled goldsmith-engraver, Albrecht Dürer, would later make when envisioning himself as *Salvator Mundi* in his 1500 *Self-portrait*.⁹⁶⁹

⁹⁶⁵ The signatures of Wenzel van Olmütz or Telman van Wezel include a similar W in their signature.

⁹⁶⁶ Poulet 1966; Kavalier 2012, p. 98.

⁹⁶⁷ Plato, *Timaeus*, 33B.

⁹⁶⁸ De Cusa 1964, book 2, pp. 294-95.

⁹⁶⁹ Koerner 1993, pp. 63-79.

8.2. Marks & Tools in Netherlandish painting

The same group of painters which we previously considered among the painter-architects or painter-cartographers can equally be mentioned for their use of either house marks or design- and construction tools. Bridging the gap between printed media, architectural design and painting is the career of Jacob Cornelisz. Van Oostsanen, whose workshop methods were previously discussed when focussing on the Amsterdam sketchbook for its architectural and cartographic content. Van Oostsanen started his thriving career as Amsterdam's leading artist with the production of high-quality woodcuts.⁹⁷⁰ It is in his first series of seven large sheet woodcuts, *The Life of the Virgin* of 1507, that Van Oostsanen first signed his artistic production.⁹⁷¹ Since Van Oostsanen's signature appears only on two of the woodcuts (the second and seventh print in the series) it is likely that they were sold as a complete series, rather than



Fig. 8.7. Jacob Cornelisz. Van Oostsanen, *Burial and ascension of the Virgin from: Life of the Virgin series*, 1507. Assembled woodcut, 35,7 x 24 cm. Paris, Bibliothèque nationale de France, inv. Ec. 6e rés; N. 3182. Photo: © BnF.

individual prints (fig. 8.7). Van Oostsanen's signature consists of a monogram of an upside-down, intertwined W and V, flanked by the capitals I and A. Although this has long been understood as the initials of his full name and his city: **Iacob War(?) Van Amsterdam**, the present consensus is that the W signifies a family house mark.⁹⁷² Van Oostsanen would use this signing method consistently in all of his

⁹⁷⁰ Leeftang 2014.

⁹⁷¹ All seven woodcuts in the series, which is partly inspired by Dürer's series of 1501, form a long frieze of about two metres, and were probably designed as contemplative wall decoration. On this series, see Veldman 2011; Meeuwissen 2012; Leeftang 2014, pp. 124-25; Amsterdam 2014, pp. 168-71, nos. 2.1-7.

⁹⁷² It seems that Van Oostsanen was still experimenting with his signature in *The Life of the Virgin* series because the signature on the escutcheon on the seventh woodcut also includes the capital C, for Cornelisz. There has been

prints, but less frequently in his painted oeuvre.⁹⁷³ Similar to the signing method with a house mark, the monogram seems to have been introduced in the printed media from the goldsmith profession as a personal hallmark.⁹⁷⁴ Much like Lucas van Leyden, Van Oostsanen seems to have been inspired by Dürer's use of the monogram as a branding mechanism as he equally places his signature on a writing palette or a small board.⁹⁷⁵ The consequent placement of his marks signifies that Van Oostsanen probably cut his own wood blocks and can equally be seen as sign of professional pride.⁹⁷⁶ Although the suggestion made by Carroll that Van Oostsanen may have been trained as a goldsmith relies completely in circumstantial evidence, our previous analysis of the Amsterdam sketchbook adequately



Fig. 8.8. Jacob Cornelisz. Van Oostsanen, *The Carrying of the Cross*. From: *Sorrows of the Virgin series*, 1513. Woodcut, 30 x 23,5 cm. Amsterdam, Rijksmuseum, RP-P-BI-6254. Photo: © Rijksmuseum.

shows the stylistic and technical architectural knowledge present in Van Oostsanen's workshop at the Kalverstraat (see chapter 3).⁹⁷⁷ As previously mentioned, Van Oostsanen did not produce any copper engravings but was very skilled at cutting woodblocks, so it might be more likely that he received training as a wood cutter, "*metselriesnijder*", or carpenter, which would also have been a more logical background in small village such as Oostzaan. Nevertheless, Van Oostsanen had strong ties with the goldsmith craft since in 1524, his daughter Anna Jacobsdr. married the prosperous Amsterdam goldsmith Michiel Brugman.⁹⁷⁸ His skills as architectural designer and his knowledge of the fashionable Antique style are showcased throughout his oeuvre. In his *Life of the Virgin series* he takes the

considerable debate on this signature recently, see Dudok van Heel 2011; Meuwissen 2014b; Dudok van Heel 2014, pp. 183-84, 190; Bleyerveld 2019, pp. xxv-xxvi.

⁹⁷³ Of his thirty-five known paintings only six are signed with the characteristic house mark. Leeftang 2014, p. 130.

⁹⁷⁴ Rosenberg 1922, vol. 4, p. 226; Folmer-von Oven 2013.

⁹⁷⁵ Pon 2004, p. 78; Leeftang 2011, p. 123.

⁹⁷⁶ Leeftang 2014, p. 131.

⁹⁷⁷ Carroll 1987, p. 131; Matile 2000, p. 178; Kik 2014a, p. 87.

⁹⁷⁸ Dudok Van Heel 2011, p. 49.

opportunity to frame his Marian narratives with an elaborate *modern* Gothic framework with intricate baldachins, imitating the side panels of an architectural shrine or perhaps even a carved altarpiece.⁹⁷⁹ Four years later, in 1513, the Amsterdam artist displayed his incredible mastering of the antique style in his *Sorrows of the Virgin* series.⁹⁸⁰ This put him at the forefront of the development of the style in the Low Countries. At a time when other artists were only hesitatingly introducing putti in their works and Jean Mone was still acquiring his Antique style in Spain, Van Oostsanen developed a frame bulging with novel and sophisticated organic Antique ornament such as garlands, dolphin-shaped spiralling columns and intricate *Astwerk* (fig. 8.8). Van Oostsanen was working for an urban milieu, with local humanist patrons such as the Fugger banker Pompeius Occo (1483-1537) and Alardus of Amsterdam (1491-1544), for whom both the Antique and profound knowledge of geometry were considered an intellectual surplus.⁹⁸¹ Given the importance of architectural skill, it seems logical that Van Oostsanen would emphasize these abilities by marketing his printed output with a house mark or a monogram. Perhaps the uncompromising statement about his own self-awareness and artistic status is displayed in his *Self-portrait* (fig. 8.9).⁹⁸² Painted in the final year of his life, the painter portrayed himself while proudly looking outward to the beholder. The portrait can be considered as the earliest certain example of individual self-portraiture by a painter in the Low Countries.⁹⁸³ Yet, taking Van

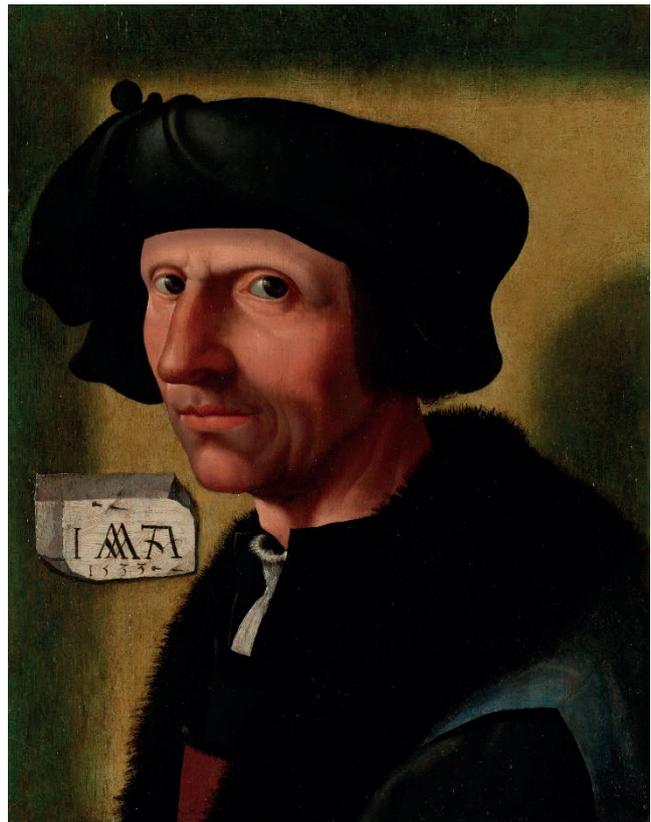


Fig. 8.9. Jacob Cornelisz. Van Oostsanen (workshop), *Self-portrait*, 1533. Oil on panel, 37,8 x 29,4 cm. Amsterdam, Rijksmuseum, inv. R-SK-A-1405. Photo: © Rijksmuseum.

⁹⁷⁹ Bleyerveldt 20019, p. xxvi.

⁹⁸⁰ Bleyerveldt 2019, no. 90.

⁹⁸¹ Alardus of Amsterdam was known as an editor of Erasmus and the posthumous works of Rudolphus Agricola (1443-1485). Agricola was in the possession of an early edition of Vitruvius, since he quotes from *De Architectura* in a letter written on 19 October 1480, to his lifelong friend Adolph Occo (1447-1503). Adolph Occo was uncle to the Amsterdam Pompeius Occo, who inherited half of his uncle's library. Akkerman & Van der Laan 2016, pp. 42-43, 213-18. On Occo, see Sterck 1934, pp. 23-30; Nübel 1972.

⁹⁸² Amsterdam, Rijksmuseum, inv. SK-A-1405. Recently the portrait is believed to have been made by his son Dirck Jacobsz, nevertheless based upon an older self-portrait of Jacob Cornelisz van Oostsanen, see Amsterdam 2014, pp. 281-82, no. 59.

⁹⁸³ Besides Van Eyck's presumed self-portrait, the only previous example of an artist's self-portrait is *The Self-portrait* of the Master of Frankfurt (Hendrik van Wueluwe), dated 1496. Antwerp, Museum of Fine Arts, inv. 5096. Firstly, the identification of the portrayed as Van Wueluwe and his wife is still questionable, and secondly even if one could

Oostsanen's knowledge of architectural design into account, the painter is only continuing the previously discussed tradition of masons and goldsmith portraits. This is stressed by the witty trompe-l'oeil of a piece of paper in which Van Oostsanen's signature is prominently displayed. That the W-mark in Van Oostsanen's signature functions as a family house mark is proven by the fact that it was also adopted by his two sons Dirck Jacobsz (1493/1497-1567) and Cornelis IV Buys (1490/1495-1532), who both used the upside-down W, flanked by their initials.⁹⁸⁴ This reminds us of Martins Schongauer's cross-shaped house mark which was used by several family members in the workshop. The hereditary nature of house marks was a sign of establishing and promoting family tradition and expertise. Van Oostsanen's grandson and presumed author of the Amsterdam sketchbook, Cornelis Anthonisz also occasionally signed his works with a bell-shaped house mark, flanked by his initials C and T. Given his activities as a geometer and cartographer, making a display of one's technical and geometrical knowledge using a house mark would have been a good way of self-promotion.⁹⁸⁵

In light of van Oostsanen's application of a monogram as a house mark, it is also possible to interpret Jan Rombouts' monogram IANR as a continuation of an artisanal family tradition of signing with house marks. Originating from a family of masons, the complicated monogram can equally be considered a house mark, rather than merely a direct response to Lucas van Leyden or Dürer's popular monogram (fig. 8.10).⁹⁸⁶ Jan Rombouts' great-uncle, Nicolaes Rombouts (who was also related to the Keldermans family), a renowned Brussels glass painter, also made use of an idiosyncratic house mark to sign his



Fig. 8.10. Jan Rombouts, *Virgin and child between two ornated columns*, 1520. Engraving, 12,5 x 8,2 cm. London, The British Museum, inv. 1858,0417.979.

establish this as a fact, this would place the double portrait more in the tradition of Guild portraits, rather than an individual statement about artistry, see Vandenbroeck 1983; Goddard 1984; Antwerp 2005, pp. 26-7, no. 4. The only true precedent may be Joos van Cleve's *Self-Portrait* of 1518, Madrid, Museo Thyssen Bornemisza, inv. 1930.125. Hand 2004, pp. 47, 61, 64, no. 22; Leeftang 2007, p. 52, no. 114; Aachen 2011, pp. 90-91, 181, no. 50; Brussels 2015, pp. 108-9.

⁹⁸⁴ Contrary to recent exhibition catalogue, we have chosen to follow Dudok van Heel's hypothesis that it was not Jacob Cornelisz' nephew Cornelis II Buys who signed his panels with "C W (house mark) B", but rather his oldest son, known as Cornelis IV Buys, see Dudok van Heel 2011; Dudok van Heel 2014, pp. 183-85. It is possible that also Jacob Cornelisz' brother, Cornelis I Buys used the same family mark, if we identify him with the so-called Master of Alkmaar. The first panel of the *Seven Works of Mercy*, originally painted for the church of St Laurence in Alkmaar and presently in the Rijksmuseum, bears a house mark which is slightly like that of Jacob Cornelisz, see Friedländer 1967-76, vol. 10, pp. 33-44; Hoogewerff 1936-47, vol. 2, pp. 347-87; Rotterdam 2008, pp. 150-53.

⁹⁸⁵ In 1533 Cornelis Anthonisz also made a modest self-portrait as he included himself as a member of the group portrait of *The Banquet of the Amsterdam's Crossbow Guild*. Amsterdam, Amsterdam Museum, inv. SA 7279.

⁹⁸⁶ Bruijnen 2011, p. 37.

work and contracts.⁹⁸⁷ More ambiguous are the reasons for the Antwerp painter Jan I van Coninxloo (1489-c.1560) to use a house mark.⁹⁸⁸ A possible explanation may be found in the membership list of the Brussels masons' guild, where in by the end of the thirteenth century "Heine van Conxloe" is enlisted among the master masons, and in 1426 a certain Inghel van Connixloe had joined their ranks.⁹⁸⁹ Although Jan had wed into a family of Brussels painters, with close ties to Bernard Van Orley and Pieter Coecke van Aelst, he too may have descended from a family of masons.⁹⁹⁰



Fig. 8.11. Quinten Metsys, *St Anne Altarpiece* (outer left wing), 1509. Brussels, Royal Museum of Fine Arts, inv. 2784. Photo: © KMSKB, Johan Geleyns – Art Photography.

The application of a house mark is particularly significant in the oeuvre of Quinten Metsys. Coming from a family of goldsmiths and architects, it would make sense that Metsys would show his background and expertise in the art of geometry through his house mark. In the outer left wing of the earlier mentioned *St Anne-Altarpiece* (fig. 2.27) an inscription in capitals reads: "QUINTE METSYS SCREEF DIT [Mark] 1509" (*Quinten Metsys wrote this*) (fig. 8.11). Often omitted in the literature is the hour glass-shaped masons' mark, placed before the year.⁹⁹¹ Perhaps intentionally, the signature is positioned upon an architectural entablature, right above a window overlooking what seems to be a hypothetical version of the



⁹⁸⁷ Pinchart 1860-82, vol. II, pp. 6-8, no. 24; Roobaert 2011. Nicolaes Rombouts' brother-in-law was the glass-painter Hendrick van Diependale, who was married to Katharina Keldermans (daughter to Rombout I Keldermans).

⁹⁸⁸ Pinchart 1860-82, vol. II, pp. 6-8, no. 29.

⁹⁸⁹ Duverger 1933, pp. 38, 52. The prominence of architectural ornament in the works of other early painting members of the Coninxloo family, may also points to an awareness and familiarity with architectural design. A good example of this is Cornelis Scerner Van Coninxloo's *Sts Anna and Joachim*, dated and signed 1526. Brussels, Royal Museums of Fine Arts of Belgium, inv. 2591), which seems to refer to Gossart's elaborate modern gothic architectural features such as the *Malvagna altarpiece*.

⁹⁹⁰ De Roever 1885, pp. 2-7; Wauters and Pinchart had seen a family tie with a fifteenth-century Tournai branch of the family. Wauters 1914, pp. 4-11; Friedländer 1967-76, vol. 8, p. 87.

⁹⁹¹ De Bosque interpreted the sign as "Anno", while Silver does not mention it. De Bosque 1975, p. 99. Silver 1984, p. 201.

north tower of Antwerp's church of Our-Lady.⁹⁹² It is only one of the few signed and dated works by Metsys and the fact that it is added to the outside wings is significant. Since altarpieces were only opened on festive days or other special occasions, the triptych would have been closed most of the year.⁹⁹³ It may be an indication of how much the Antwerp painter wanted his authorship to be noticed. The fact that the son of a goldsmith and the brother of a master mason signed his work with a house mark should leave no doubt about the message the artist wanted to communicate:



Fig. 8.12. Quinten Metsys, *Paper slip from "The Money changer and his wife"*, 1514. Oil on panel, 70 x 67 cm. Paris, Musée du Louvre, inv. 1444. Photo: © Musée du Louvre.

besides being a good painter, he wanted to state his ample experience in geometry and its applications. Also, in the famous *The Money changer and his Wife*, Metsys left his signature and date.⁹⁹⁴ On a roll of parchment on the shelf there is an inscription which reads "*Quinten Matsys Schilder 1514*". Underneath the signature Metsys placed a small hammer. Not only does he signify to the beholder that he is a painter, by including the hammer, he makes it clear that he is also proud to have been



Fig. 8.13. Lanceloot Blondeel, *St Luke painting the Virgin* (detail), 1545. Oil on canvas, 144,5 103 cm. Bruges, Groeningemuseum, inv. O.18. © Lukasweb.

trained as a smith. In addition, a small slip of paper between one of the books on the shelf bares the same house mark which Metsys included in his *St Anne-Altarpiece* (fig. 8.12).⁹⁹⁵ Quinten Metsys' signing method with a hammer immediately brings us to

⁹⁹² Although the Antwerp tower would only be completed until 1518, Joos II Metsys was in close contact with both Rombout II Keldermans and Domien de Wagemakere which may have provided information on spire models such as those of Antwerp or Mechelen, see Kik 2014, p. 84.

⁹⁹³ On this practice, especially see Jacobs 2012, pp. 8-14.

⁹⁹⁴ Paris, Musée du Louvre, inv. 1444. Throughout his attributed oeuvre Metsys left five signatures. Silver 1984, nos. 10, 16, 48, 49, 54 and 55.

⁹⁹⁵ A later copy after Metsys in Brussels has a variation on the inscription which reads "*Quinten Matsys schilder inventor 1514*". Brussels, Royal Museum of Art Belgium, inv. 7356. Interestingly, the paper slip sticking out of the book also has a mason's mark remarkably similar to the one on the *St Anne Altarpiece*. It may be possible that this copy was made after another version from Metsys' workshop which also included the house mark. The oeuvre of Marinus van Reymerswaele shows adequately that there was a market for this new genre piece of religious scenes in secluded offices. The existence of several versions of this panel would not have been uncommon for Metsys' workshop practice which did not shy away from making several versions for the developing Antwerp art market. This is also supported by the depiction of the Money Changer in the lower right-hand corner of Willem van Haecht's *Atelier of Apelles* (The Hague, Mauritshuis) in which the wife's prayer book depicts an Adam and Eve, rather than the Virgin and Child in the Brussels copy and Louvre original. Silver 1984, p. 212, no. 16; Woodall 2014.

Lanceloot Blondeel, who consistently used a trowel in his signature to emphasize his background and training as a mason in Bruges (fig. 8.13). Since architectural and ornamental frameworks dominate the painted oeuvre of Blondeel, and his involvement in several sculptural, cartographic and architectural commissions, there can be little doubt that the trowel in combination with a LAB monogram functions as a testimony of the artist's geometrical knowledge. Blondeel's son-in-law, Pieter Pourbus, also occasionally signed using a house mark, in combination with a more humanist Latinised "PETRUS.POURBUS.FACIABAT", or otherwise flanked by his initials P.P. (fig. 8.14).⁹⁹⁶ In his monography on Pourbus, Paul Huvenne recognised the house mark as a signifier of quality and experience.⁹⁹⁷ In his double signing method with Latin capitals, Pourbus represents a transitional stage taking place at the middle of the sixteenth century in which the practice of showing one's geometrical expertise by signing with house marks or tools had become less relevant and gave way for the more humanist Latin inscription with capital letters.

This signing method with Latinised names and Roman capitals was not novel by the 1540 and -50's as it was used in humanist and courtly contexts, and neither was the combination of Roman capitals with a house mark, as also Quinten Metsys signed at least two works with a Latin signature.⁹⁹⁸ The Latinised humanist signature, however, is mostly applied by artists working in a court context, with an antiquarian interest. Again, Jan Van Eyck may be credited with introducing the Latinised capitals in his signatures, as a result of his courtly working environment. The signing method resurfaces with Jan Gossart.⁹⁹⁹ Working for the son of Van Eyck's patron, Gossart considered himself as the artistic heir to Jan van Eyck's artistic legacy, as is testified by his compositions and his painting technique inspired by the Bruges master.¹⁰⁰⁰ From the time he was appointed at the court of Philip of Burgundy, Gossart signed with the Latin signature "IONNES MALBODIUS PINGEBAT", written in capitals, probably in

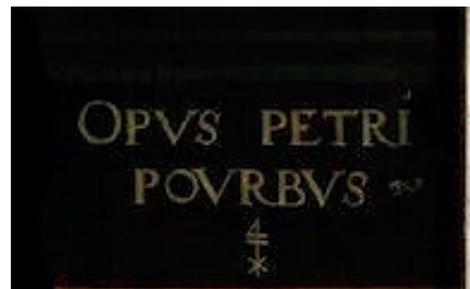


Fig. 8.14. Pieter Pourbus, *Portrait of Jan van Eyckerve* (detail), 1551. Oil on panel, 140 x 180 cm. Bruges, Groeningemuseum Museum, inv. O.108. Photo: © Lukasweb.

⁹⁹⁶ One of Pourbus' close collaborators, Jacob van den Coornhuuse (1529/30 -1585) also signed with the combination of a house mark and a monogram (IAVC), for example in his copy after Jan Provoost's *Last Judgement*, Bruges, Groeningemuseum, inv. GRO0154.I. On Van den Coornhuuse's signature, see Huvenne 1984, p. 32-33.

⁹⁹⁷ Huvenne 1984, p. 31; Huvenne 2017, p. 47.

⁹⁹⁸ *The Old Man*, Paris, Musée Jacquemart-André, inv. 829, is signed "QUINTUS METSYS / PINGEBAT ANNO 1513"; *Christ Blessind and Virgin in Prayer*, Madrid, Museo del Prado, inv. 1561/2, is exceptionally signed on the back "OPUS QUINTINI METSYS AN MDXXIX". Silver 1984, nos. 49 and 54.

⁹⁹⁹ On Gossart's signing method, see Burg 2007, pp. 416-18.

¹⁰⁰⁰ On Gossart and his relationship to Jan van Eyck as a historically conscious placement in the Netherlandish tradition, see Bass 2016, pp. 26-38.



Fig. 8.15. Bernard van Orley, *The Apostles Thomas and Matthias Altarpiece* (detail), 1515. Oil on panel, 140 x 180 cm. Vienna, Kunsthistorisches Museum, inv. 992. Photo: © Kunsthistorisches Museum.

response to the story of Apelles who according to Pliny signed with “Faciebat”.¹⁰⁰¹ The distinct Roman capitals reflect not only the tradition in Netherlandish painting established by Van Eyck, but perhaps more importantly they recall the local antiquarian endeavours of his patron and humanist scholars around him such as Geldenhouwer. In 1502, an authentic Roman stone slab dating from the rule of Septimius Severus was discovered at the so-called Roomburg near Leiden. Although the inscription itself was of a rather administrative nature, the stone was quickly adopted by local antiquarians such as Geldenhouwer and Cornelius Aurelius (1460-1531) as one of the tangible pieces of evidence for the local Batavian antiquity.¹⁰⁰² Besides Gossart’s own journey to Rome, it was Roman Latin inscriptions such as these local archaeological finds which provided a firm basis and motivation for the artist’s seemingly inscribed signature in Roman capitals in accordance with the humanist courtly milieu. Bernard Van Orley who, since 1518, was employed by the Habsburg court of Margaret of Austria signed in a Latinised form with capitals.¹⁰⁰³ Significantly, on the central panel of the *Brussels Joiners’ and Coopers’ Altarpiece* the artist signed BERNART VAN ORLEI, on a medallion of finely imitative goldwork. At the centre of it, in intricate floral and geometric patterns the artist also placed a monogram BAO (Bernardus ab Orley), most likely in imitation of Dürer’s famous trademark. Despite the use of capital letters, in this early work the Brussels artists is still eager to make an associative combination between filigree goldsmith work, geometry and the use of a monogram (fig. 8.15).¹⁰⁰⁴ This association is even enhanced by the witty addition of the monogram in the form of a piece of jewellery as part of the belt of a woman in the central panel. He would repeat the use of this monogram at the bottom of the central panel of his *Job*

¹⁰⁰¹ Pliny, Book I; Suykerbuyk 2013, p. 33. The passage was influential to a whole range of German and Italian artists to sign with the imperfect form *Faciebat*, such as Michelangelo, Dürer, Lucas Cranach the Elder or Hans Baldung Grien, see Söll-Tauchert 2010, pp. 210-11.

¹⁰⁰² Bass 2016, pp. 94-102; Enenkel & Ottenheim 2018.

¹⁰⁰³ Galand 2013, p. 35-36.

¹⁰⁰⁴ On the geometrical aspect of the signature, also see Kavalier 2012, p. 92.

and Lazarus Polyptych (1521), in combination with his personal devise “ELX.SYNE.TYT”.¹⁰⁰⁵ His later works such as his *Holy Family* panels in Paris and Madrid would be more in line with courtly traditions as they only include a Latinised signature in capitals, combined with *Pingebat* or *Faciebat* respectively.¹⁰⁰⁶

For artists working in courtly environments such as Gossart or Van Orley the practice of signing with a house mark or tool as a reference to their geometrical background or knowledge seems to have been less relevant as the employment by the court by itself would have added to the status of the artist. Other contemporary artists connected to the court such as Jean Mone, Conrad Meit, Jacques Du Broeucq and Guyot de Beaugrant also signed their work and documents using capitals rather than signing with a house mark or tool.¹⁰⁰⁷ This was even the case with renowned court architects. Both Rombout II Keldermans, Evert Spoorwater (?-1475) and Loys van Boghem did not sign with a more traditional mason’s mark or tool proper to the architectural practice, but rather signed their names on construction documents and contracts by using courtly monograms of elegantly intertwining curly letters.¹⁰⁰⁸ By the second half of the sixteenth century the practice of signing with signifiers of geometrical knowledge gradually became outdated and less common also outside courtly circles as the importance of the arts of the quadrivium also lost value in favour of those of the trivium as a means of inscribing paintings within the intellectual canon of the liberal arts. This development will be explored in the following chapter.

¹⁰⁰⁵Brussels, Royal Museum of Art Belgium, inv. 1822. The monogram is also applied in four preparatory drawings for the tapestry series *The Foundation of Rome* (Munich, Staatliche Graphische Sammlung, invs. 987-981). Galand 2013, p. 35-36.

¹⁰⁰⁶ Paris, Musée du Louvre, inv. RF 1473; Madrid, Museo del Prado, inv. P02692.

¹⁰⁰⁷ Pinchart 1860-81, pp. 6-8. Signing with capitals was also more common among sculptors, in general and is not necessarily a sign of courtly association, see Burg 2007; Bredekamp 2013.

¹⁰⁰⁸ Pinchart 1860-81, vol. II, pp. 6-8, nos.16, 28; De Jonge 2017b, p. 138-39; Hurx 2018, p. 239.

9. From Mercury to Saturn: New Humanist perspectives and the Liberal Arts

9.1. The Cyclopean Apelles

By the middle of the seventeenth century the reputation of Quinten Metsys (1466-1529) had reached a certain cult status in the Antwerp intellectual milieu of art collectors and artists. The best-known reflection of this fame is probably the collection of art collector Cornelis van der Geest (1577-1638). In his *Kunstkamer*, famously represented by Willem van Haecht (593-1637), Van der Geest is shown presenting the *pièce the resistance* of his art collection - Quinten Metsys' *Madonna of the Cherries* - to the visiting Albrecht and Isabella in 1615.¹⁰⁰⁹ Not only did he own several of Quinten's works, in 1629 he was responsible for the festive commemoration of the hundred year's jubilee of the Antwerp painter's death. On this occasion he had the painter's body relocated from the Antwerp Carthusian convent to a new grave in Our-Lady's church.¹⁰¹⁰ The old tombstone was placed upon the church façade as part of a commemoration monument which also included two poetic odes and a portrait of the painter, to mark the centenary of Metsys' death. The central theme of the monument is not so much the painter's career as such, but rather his miraculous professional transformation from a gold- or ironsmith to that of a painter. The honorary adage "Connubialis Amor De Mulcibre Fecit Apellem", was emphasized by two bas-reliefs of a painter's pallet and an anvil hanging from a Gothic trefoil (fig. 9.1).¹⁰¹¹



Fig. 9.1. Anonymous, *Commemoration monument to Quinten Metsys*, 1629. Antwerp, Cathedral of Our-Lady façade. Photo: © Author.

¹⁰⁰⁹ Smeyers 1968; Antwerp, Rubenshuis, inv. 148948.

¹⁰¹⁰ Delen 1959, p. 70; Van Beneden 2009, pp. 64-7.

¹⁰¹¹ On the commemorative stone, especially see Büttner 2011.

The turn from smith to painter was blown up to mythical proportions during the seventeenth century, and what started out as merely a *fait divers* of his early career quickly became one of the most characteristic aspects of the artist's life, almost overshadowing the focus on his artistic output. The origin of the anecdote is to be found in Dominicus Lampsonius' *Pictorum Aliquot celeberrimum Germaniae inferioris effigies* (1572), published posthumously by Hieronymus Cock's widow Volcxken Diericx at the *Aux Quatre Vents* publishing house. Lampsonius' emphasis in the poem which accompanies the engraved portrait of Quinten Metsys rests utterly on the professional change (fig. 9.2):

*A Rough Cyclop blacksmith was I before,
But when my sweetheart was also courted by a painter
She made me understand with some reproach,
**That the thundering blows on the anvil where less pleasing to her
Than the silent play of brushes,**
The force of Love made me a painter.
The Truth of this is indicated by a little hammer
which I selected for a signature on my pictures
As Cypris obtained from Vulcan the arms for her son,
O great poet, You have made a clever painter from a blacksmith.¹⁰¹²*

Despite the reputation still held by many smiths at the time, Lampsonius was keen on creating a contrast between the vile, mechanical labour and low status of Quinten's family origins on the one hand and the noble, clean intellectual nature of the painter's soft brush strokes on the other. Many of the mythological comparisons to Cyclops or Vulcan would be repeated tirelessly throughout Metsys' historiography until the nineteenth century. It was also Lampsonius who introduced the love story as an explanation for how the blacksmith was seduced by a young woman who preferred the soft brush

¹⁰¹² 'Ante faber fueram Cyclops ast tibi mecum/ Ex cequo pictor caepit amare procus/ Seque graves tuditum tonitrus postferre silent/
Peniculo obiecit cata puella mihi/ Pctorem me fecit amor tudes innuit illud/ Exiguus tabulis quae nota Venus arma rogerat/ Pictorum e
fabro fume Poeta facis'. Lampsonius 1572, fol. 9, translation from Silver 1984.

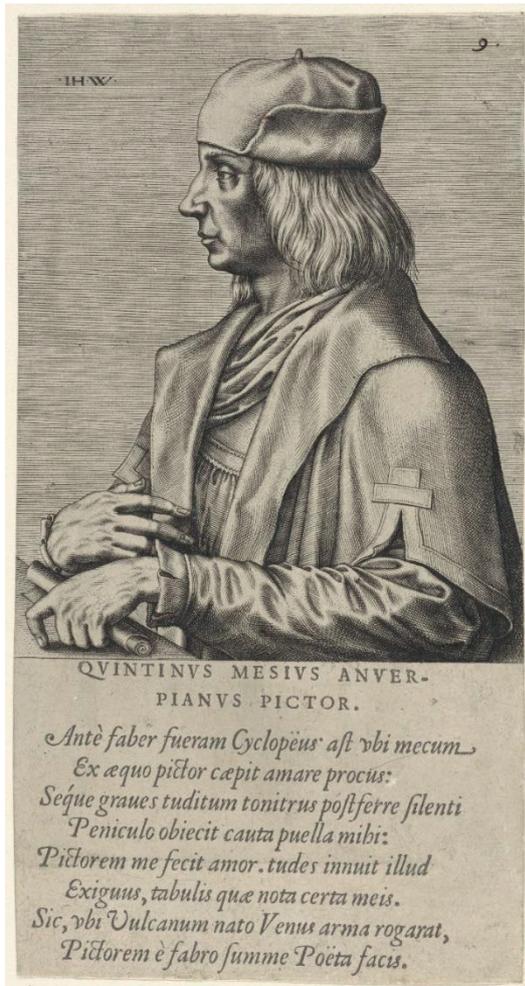


Fig. 9.3. Johannes Wierix, *Portrait of Quinten Metsys*. In: Domenicus Lampsonius, *Pictorum Aliquot Celebrium Germaniae Inferioris Effigies Antverpiae*. Hieronymus Cock, Antwerp 1572. Amsterdam, Rijksmuseum, inv. RP-P-OB-67.050. Photo: © Rijksmuseum.

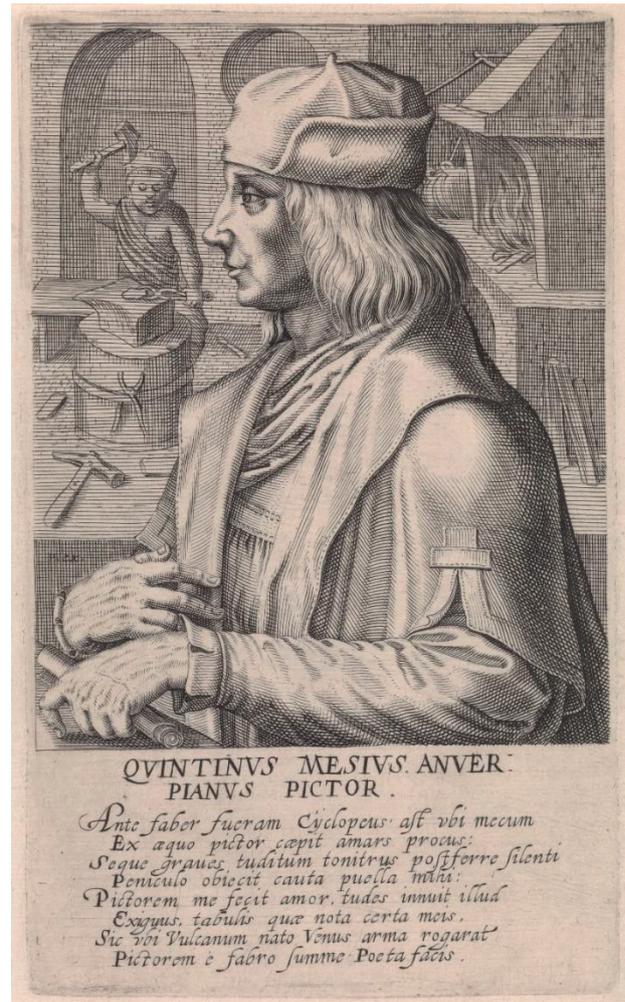


Fig. 9.4. Hendrick Hondius, *Portrait of Quinten Metsys*. In: Domenicus Lampsonius, *Pictorum Aliquot Celebrium Germaniae Inferioris Effigies Antverpiae*. Hendrick Hondius, The Hague 1610. Amsterdam, Rijksmuseum, inv. RP-P-1907-375. Photo: © Rijksmuseum.

trokes over the hammering thunder of the anvil.¹⁰¹³ During the remainder of the seventeenth century, as Metsys was heralded as founder of the Antwerp school of painting, the legend of the blacksmith was further exploited. For his extended re-edition of Lampsonius' *Effigies*, Hendrick Hondius re-engraved the original set of plates of Hieronymus Cock and replaced the background hatching with

¹⁰¹³ Van Mander already showed a remarkably critical attitude towards this story and added an alternative version of which he states that it is probably more genuine. In this story of equally Dickensian proportions Quinten had been a blacksmith until the age of twenty. Due to the hardship and heavy labours of working as a smith, the young artist became gravely ill, making him unable to earn a proper income to support both himself and his elderly mother. Someone of his close friends visiting his sick bed wisely suggested the poor blacksmith to make a modest profit by colouring small devotional prints, that were distributed among children during the annual procession on Shrove Tuesday. While doing this, Quinten had found his love for painting, which had never left him since. Van Mander leaves the truthfulness of the stories to the judgment of the reader and states that both versions could be true. Karel Van Mander, *Het Schilder-boeck*, Haarlem 1604, fols. 215r and 215v. See H. Miedema (ed.), *The Lives of the illustrious Netherlandish and German Painters*, 6 vols., Doornspijk 1994-99, vol. I, pp. 119-20.

representations of instructive objects or references to support the accompanying poem.¹⁰¹⁴ In the case of Metsys, this is the interior of a blacksmith's workshop in which the 'thundering blows on the anvil' accentuate the painter's former profession (fig. 9.3). Stimulated by the Antwerp art collector Peter Stevens, who owned several of Metsys' paintings, two additional biographies were published in 1648 and 1658.¹⁰¹⁵ Frans Fickaert's *Methamorphosis, ofte wonderbaere veranderingh' ende leven vanden vermaerden Mr. Quinten Matsys (...)* is a small booklet of twenty-two pages, mainly written as an explanation of the monument that Van der Geest erected for the Antwerp painter and – as the title already suggests – repeats Lampsonius and Van Mander on the story on the changeover from blacksmith to painter. Fickaert, however added a variation to the love story in which Quinten tries to persuade not his girlfriend, but rather her father, who is also a painter. To trick him, Quinten paints a fly on one of the portraits which he had just finished. When the father-in-law tries to scare off the fly resting on his work, he can do nothing but recognize Quinten's talent. The story is one of the many variations on Pliny's well-known story of Zeuxis and Parrhasius, in which the experienced painter Zeuxis is tricked by a painted curtain.¹⁰¹⁶ Ten years later, the painter and poet Alexander van Fornenbergh published a lengthier work with many allusions and comparisons to mythology and antiquity: '*Den Antwerpschen Prometheus ofte Cyclop'schen Apelles (...)*'.¹⁰¹⁷ The author explains in the introduction that despite the efforts of Van Mander – 'who only devotes two pages to him' – much more is to be told about Metsys. Still, about half of the pages are devoted to the origin story. Besides repeating the three versions of the story as it was told by Lampsonius, Van Mander and Fickaert, Fornenbergh added two chapters in which he made comparisons to similar cases in which painters are born out of humble circumstances but eventually found their true calling.¹⁰¹⁸

The historiographical treatment of Quinten Metsys represents a changing attitude in art theoretical thinking in the Netherlands which can be situated at around the middle of the sixteenth century. While artists such as Blondeel and Metsys took great pride in their family background as architectural designers, goldsmiths, and masons (proudly displayed in their signing method), by the late 1550s and early 1560s this same background was now being regarded as an element of backwardness or humble origins. This development should be considered within the contextual framework of a new way of classifying the visual arts (painting, sculpture and architecture) as noble,

¹⁰¹⁴ On the relationship between the series published by Cock and Hondsius, especially see S. Porras, 'Repeat viewing: Hendrick Hondius' Effigies', S. Porras & J. Woodall (eds.), *Picturing the Netherlandish Canon*, Online publication of The Courtauld Institute: <http://www.courtauld.org.uk/netherlandishcanon/groups/essay01.html>. Consulted 15/03/2013.

¹⁰¹⁵ On Peter Steven's collection, see Briels 1980.

¹⁰¹⁶ Pliny the Elder, *Natural History*, XXXV:36.

¹⁰¹⁷ Von Fornenbergh 1658. Also see Freedberg 1989, pp. 236-40.

¹⁰¹⁸ The Antique, Italian and Netherlandish comparisons, taken both from Pliny, Van Mander and Vasari, include Cleophranthus of Corinth, Giotto, Giorgione, Andrea del Sarto, Antonio Palaiollo, Botticelli, Polidoro da Caravaggio, Jacob Cornelisz. van Oostanen, Albrecht Dürer and Maarten van Heemskerck.

and as members of the Liberal Arts. Among new humanist thinkers the accent was shifting from the importance of the mathematical arts of the Quadrivium towards the more literary and oratory arts of the Trivium, such as Poetry and Rhetoric. The contrast between these two approaches should become clear when comparing Lampsonius' *Effigy* for Metsys to an almost contemporary effigy written for Lanceloot Blondeel in 1561 by the Bruges humanist poet Eduard de Dene (1505-1578). Much like Lampsonius, De Dene included the literary epitaph for the recently deceased Bruges painter as part of a collection of effigies on prominent Bruges citizens:

Here lays buried the body of Lanceloot Blondeel / **First he was at work as a mason and a great artist with the mason's trowel** / after which he became a painter / following Apelles's brush in painting / thus completing himself in Architecture.¹⁰¹⁹

Although De Dene makes use of the similar humanist Plinian tropes by referring to Apelles, he makes it clear that Blondeel was a great artist *thanks* to his handling of the mason's trowel, and not despite it. For De Dene, the term Art still had clear references to the liberal arts (and geometry in particular) so that Blondeel's family background in architecture could only be regarded as an advantage. The brushstrokes of painting were not the highest goal of artistic endeavour but served the completion of his study of architecture, which was still seen as superior to painting. Lampsonius' biographical poem on Metsys, however, completely reverses this idea by representing painting as a salvation from the manual labours of the blacksmith workshop. Lampsonius not only represents a changing attitude towards the position of painting and geometry but was at the very heart of the intellectual humanist milieu responsible for the dissemination of these novel art theoretical ideas.

9.2. From Liège to Antwerp: Lombard, Lampsonius and Art Theory

Lampsonius' *Effigies* would not only be the first book to establish a canon of Netherlandish painting, but also the first to introduce a novel art theoretical thinking which originated from Vasari.¹⁰²⁰ Vasari's approach to the arts in which he famously described painting, sculpture, and architecture as the *Arti Del Disegno*, disconnected the previous dependence on Geometry or the *Artes Liberales* in order to raise the status of painting. Vasari's ideological Tuscan theory created a new paradigm in which the professions of painting, sculpture and architecture could be considered as an individual and newly defined form of art. As a guiding concept of his *Vite* he exercised a notion of "art", which ennobled

¹⁰¹⁹ 'Hier licht. twleesch begraven van Landslood blondeel voormaels werckeman gheveist / met maetsers truweel groot constenare / schilder ghenorden der naer Reyn naevolgher in pictura Apelles pincheel wetenlick inde Architecture ghebeel'. Waterschoot & Coigneau, 1976-77, p.22; Devliegher 1987, p.87.

¹⁰²⁰ Puraye 1950; Melion 1991, pp. 130-131; Filipczak 1993; Tullio Cataldo 2017.

painting while resisting the old-styled classification as a liberal art.¹⁰²¹ This found its institutional expression in the foundation by Cosimo I de' Medici of the *Accademia del Disegno* in 1563, which could operate outside the previous Florentine guild regulations and which would serve as a model for later similar institutions.¹⁰²² One of the first environments outside Italy where the seeds of this novel art theoretical thinking would flourish was found in the humanist network around Lampsonius and Lambert Lombard in Liège. Lampsonius had read Vasari's 1550 edition of the *Vite* and from late 1564 he would correspond with Vasari about art theory, the relationship between history- and landscape painting and provide the Florentine artist with information concerning Netherlandish artists, which would form the basis for their inclusion in the extended 1568 edition.¹⁰²³ Lampsonius' own interest in art history and the theoretical appraisal of the art of painting was most likely instigated by Lombard, who taught him painting and who's own scholarly interest in artistic developments and local antiquity - especially after his journey to Italy in 1537-1538 - made him one of the most learned Netherlandish artists of his generation.¹⁰²⁴ On 25 April 1565 Lombard himself wrote a letter to Vasari in which he provided the Italian with his own vision on the development of art history and requested him to send drawings of Margaritone d'Arezzo, Gaddo Gaddi and Giotto in order to make a qualitative evaluation between Italian and Northern fourteenth-century traditions.¹⁰²⁵ Inspired by Vasari's secular hagiographies of artists, Lampsonius also wrote a biographical essay in Latin prose on the *Vita* of Lombard in 1565, published by Hubert Goltzius and dedicated to Abraham Ortelius.¹⁰²⁶ It becomes clear from this *Life of Lombard* that by the second half of the century, the terms "art", "science" and "artist" had become something which exceeded the mere reference to knowledge of the liberal art of geometry. When describing Lombard's erudite study of Antique sculpture, Lampsonius tells us that the Liège artist had the ability to pervade to the core of the sculpture, which Lombard understood as a science (*Scientia*), which followed a strict grammar (*Grammatica*), hidden in the spirit of the arts (*artis succum*), which followed firm rules.¹⁰²⁷ Although previous artists and theorists such as Alberti, Leonardo Da Vinci, Jacopo de' Barbari, Pomponio Gauricus or Albrecht Dürer had equally developed an art theory in which general underlying rules or systems in artistic design were scrutinized, their answers were found in the applications of the liberal art of geometry and mathematical proportions

¹⁰²¹ On the efforts by artists to include the *arti di disegno* among the liberal arts, see Blunt 1970.

¹⁰²² Barzman 2000, with further literature.

¹⁰²³ Becker 1973; Kemp & Kemp 1973; Filipczak 1993; Sciolla & Volpi 2001; Miedema 2012, pp. 106-9; Wouk 2012.

¹⁰²⁴ Kemp & Kemp 1973; Wouk 2012, pp. 35-46.

¹⁰²⁵ Frey 1923-40, pp. 163-67; Kemp & Kemp 1973; Sciolla & Volpi 2001, pp. 36-40; Wouk 2012, p. 38.

¹⁰²⁶ Hubeaux & Puraye 1949, pp. 52-7; Becker 1973, pp. 45-61; Sciolla & Volpi 2001, pp. 41-60.

¹⁰²⁷ Hubeaux & Puraye 1949, p. 63; Sciolla & Volpi 2001, p. 37; Miedema 2012, p. 108; Wouk 2018, p. 64; Wouk 2019.

as they appeared both in the human body, architecture and music.¹⁰²⁸ The reference of Lombard and Lampsonius to the more literary term ‘grammar’ as a science and art, is telling for the way in which the art theoretical framework in which this liberal art of geometry was gradually being replaced by the more literary and oratory arts of the trivium (*Grammatica, Rhetorica* and *Logica*). In humanist literature and scholarly circles, the study of Latin grammar and rhetoric was considered the humanists’ art, a notion which would increasingly be adapted by a class of learned artists and.¹⁰²⁹ Naturally, the arts of the trivium, and essentially rhetoric, had since the dawn of the century been an essential element in the changing social position of the artist, which also played a major role within the Netherlandish context with its strong ties between visual artists and chambers of Rhetoricians. Elegant and correct use Latin played both a means and an end for Alberti and Gauricus, as much as it did for Netherlandish humanists such as Grapheus. Yet, the use of geometrical expertise was increasingly abandoned during the second half of the century. The erudite humanist milieu around Lombard in Liège would be crucial to this further development of art theory in the Netherlands. Many of Lambert’s pupils, such as Frans Floris, Hubert Golzius, Anthonis Mor, Willem Key or Lampsonius himself, would become key figures in the establishment of a community of learned artists and humanists in the commercial and artistic centre of Antwerp which included Ortelius, Pieter Bruegel the Elder, Joris Hoefnagel, Hieronymus Cock, Jacques and Nicolaes Jongelincx, Justus Lipsius and Christoffel Plantin.¹⁰³⁰

The best-known expression of Lombard’s art theoretical thinking in the Antwerp artistic milieu is probably the self-promotional façade of Frans Floris’ workshop, built around 1562-63.¹⁰³¹ With its complex iconographical and allegorical program it was unique among the Antwerp artist’s houses which were generally unrecognizable from other dwellings in the city.¹⁰³² As a self-conscious statement of the intellectual artist, the house is painted with representations of allegorical figures in relationship to the artistic inspiration and mechanical production of visual arts. Rather than a more traditional Liberal Arts, as one would be inclined to expect the decorative program of the artist’ house consists of *Diligence, Use, Poetry, Architecture, Labor, Experience* and *Industry*. Placed above the main door, in

¹⁰²⁸ Nevertheless, Lampsonius’ personal library did contain several volumes on geometry such as a 1544 edition of Archimedes and Ascalonites (Brussels, Royal Library, inv. VB 4.998 C RP) and the “book on painting” by Dürer which he acquired in Antwerp in 1587. Pinchart 1860-81, vol. I, pp. 280-81. Many thanks to Robrecht Janssen for the reference to Archimedes.

¹⁰²⁹ Baxandall 1971, p. 2; Filipczak 1987; Bussels 2011.

¹⁰³⁰ Melion 1991, pp. 129-42, 173-82; Van de Velde 1996; Meganck 2017; Wouk 2018, pp. 47-53.

¹⁰³¹ Van de Velde 1975, pp. 307-13, 487-88; Filipczak 1987, pp. 16-19; King 1989; King 2002, pp. 182-89; Becker 2002; Wouk 2014; Wouk 2018, pp. 467-501.

¹⁰³² A contemporary artist house with a slightly similar iconographical program was the house of Cornelis van Dalem, built in 1563. Although more modest than Frans Floris’ house, the façade equally promoted the academic status of painting itself and famously included busts of Jan Van Eyck and Albrecht Dürer as representations of *Pictura* and *Sculptura*, respectively. Grossmann 1954; King 2002, pp. 173-80; Wouk 2014; Wouk 2018, p. 497.

between of these imitative sculptural niches is an allegorical representation of the Visual Arts (in contrast to the Liberal Arts). At the centre of the composition Floris positioned a figure which can be seen holding a compass. She had traditionally been interpreted as Geometry.¹⁰³³ However, this view was more recently convincingly contested by Ed Wouk as a representation of *Disegno*, in accordance with Vasari's (and in extenso Lombard's) art theory of *Disegno* as the mother of painting, sculpture and architecture.¹⁰³⁴ The omission of geometry on this façade is significant, especially in light of the importance given to the liberal art by a previous generation. In fact, the social and professional background from Floris is surprisingly similar to that of Blondeel and Metsys. Like these two painters, Frans Floris was born into a family of stonecutters, sculptors, and master masons, and not unlike Quinten Metsys, Frans' eldest brother Cornelis would continue his father's trade as a sculptor and architect.¹⁰³⁵ As early as the fifteenth century many members the de Vriendt-family were active as stonecutters and masons. Floris de Vriendt, (great-grandfather to our Floris) was a member of the Brussels Mason's guild and from the middle of the fifteenth century he moved to Antwerp where he was active on the building site of the Antwerp Church of Our-Lady.¹⁰³⁶ In 1458 Floris de Vriendt would become dean of the Antwerp mason's guild (*Vier Gekroonden*).¹⁰³⁷ His son Jan Florisone de Vriendt continued the mason's profession and would equally become dean of the guild in 1479 and land surveyor (*erfscheyder*) to the city.¹⁰³⁸ Cornelis, the son of Jan and father to Frans and Cornelis Floris, was also enlisted as a sculptor at the Antwerp mason's guild. The house where Frans, Cornelis and Jacques Floris grew up was located in the Steenhouwersvest, were at that time also Rombout II Keldermans was housed.¹⁰³⁹ Similar to Blondeel and Metsys, Frans Floris initially worked as a sculptor or stone-cutter within the family tradition and only later made the decision to devote himself to painting.¹⁰⁴⁰ If Frans Floris (and Cornelis Floris) would have followed the art theoretical thinking of Blondeel or Metsys, they would have taken pride in sharing a long family lineage of professions rooted in geometrical design methods. Instead, Frans Floris consciously avoids these old intellectual mechanisms of social elevation and replaces them by the more classical and novel interpretations such as they were present in the humanist circles around the workshops of Lombard, and in extenso those

¹⁰³³ Van de Velde 1975, p. 421; Becker 1972, p. 126; Filipczak 1987, p. 34; King 2002. Ilja Veldman identified the allegorical figure as *Practica*, based on Cesare Ripa's *Iconologia* (1603), see Veldman 2005.

¹⁰³⁴ Wouk 2014; Wouk 2018, p. 484-85.

¹⁰³⁵ Cornelis would not only become one of the most prominent sculptors in Antwerp but his sculptural interpretation of the Antique, sometimes coined Floris-style, would be disseminated throughout northern Europe, from Scandinavia to the most eastern borders in present-day Poland. On Cornelis Floris and his European influence, see Hedicke 1913; Huysmans 1996; Meganck 2005; Kavalier 2013; Ottenheym 2013; Skibinski 2014; Neville 2017; Osiecki 2017.

¹⁰³⁶ Duverger 1933, p.45; Van de Velde 1975, p. 22.

¹⁰³⁷ Van Cauwenberghs 1889, p. 22.

¹⁰³⁸ Van de Velde 1975, pp. 22-23.

¹⁰³⁹ Van de Velde 1975, p. 24; Hurx 2017.

¹⁰⁴⁰ Van Mander 1604, fol. 2338-239v.; Wouk 2018, p. 28.

of Raphael and Vasari. In extenso, his method of signing refrains from the use of the family house mark or the use of a tool as signifiers of geometrical expertise, but he rather used his initials F.F. followed by IN(ventit) or F(ecit, or Faciebat), depending on his involvement in the workshop process.¹⁰⁴¹

At the same time, the Ghent painter and rhetorician Lucas d'Heere (1534-84) followed a similar art theoretical discourse. D'Heere, a collector poet and painter, was trained at the workshop of Frans Floris and thus shared his novel interpretation of the Visual Arts, which was represented in his 1565 *Den Hof en Boomgaard der Poësien* ('The Court and Orchard of Poetry').¹⁰⁴² Versed in the language and metric schemes of both the French *Pléade* school of poetry and the local guild of Rhetoricians, d'Heere composed an anthology of seventy-eight poems on the nature of art in the Low Counties. Among these are laudatory poems addressed to Lampsonius, Hubert Goltzius and Frans Floris.¹⁰⁴³ D'Heere's interpretation of the term art is completely in harmony with that of Floris and Lampsonius, as we read in the oft-quoted closing poem of *Den Hof en Boomgaard der Poësien*, which is addressed to the Violieren, the Antwerp guild of Rhetoricians.¹⁰⁴⁴ When Apollo questions which is the best among the arts, the nine muses conclude after an animated debate that *Pictura* unquestionably is "*de Constichste conste der consten*". Painting is not the *primus inter pares* among all the arts because its application of geometry but rather because it was an inspired gift (*ingenium*) from God.¹⁰⁴⁵ This competition between the arts reminds us of a similar *paragone* in Jean Lemaire de Belges's *Couronne Margueritique*. Whereas Painting lost this competition at the beginning of the century to the courtly and geometrically oriented goldsmith's craft, in d'Heere's humanist poem it is Painting which comes out as victor. Other arts which are competing for the laurel wreath in d'Heere's poem are *Medicine*, *Sculpture* and *Rhetoric*, only the latter being one of the more traditional classification of liberal arts. In fact, geometry either as allegorical figure or liberal art is not mentioned in any of d'Heere's poems. This is even more remarkable considering that he was the son of Jan d'Heere or Mijneren (1502/5-1576), one of the most renowned architect-sculptors of his generation.¹⁰⁴⁶ He was involved in some of the major architectural commissions of his time. Guicciardini described him as "*architetto e scultor' grande*", which was later repeated by Van Mander.¹⁰⁴⁷ His first commission was the tomb of Isabella of Austria

¹⁰⁴¹ Wouk 2018, p. 185-87.

¹⁰⁴² Waterschoot 1966; Becker 1972; Waterschoot 1974; Van der Velde 1975, pp. 2-5; Melion 1991, pp. 134-38; Ramakers 2010; Miedema 2012, pp. 111-13; Wouk 2018, pp. 182-83.

¹⁰⁴³ D'Heere 1565, nos. XIX, LXI, LXXII; Waterschoot 1974, pp. 33-35.

¹⁰⁴⁴ D'Heere 1565, no. LXXVII.

¹⁰⁴⁵ D'Heere later repeated this topos of painting as a divine art in the recently rediscovered *Tableau Poétique*, written between 1569 and 1572 after his emigration to England. In the poem "*A ses Disciples*", d'Heere describes those who 'handle both the pen as the divine paint brush, become companions of the greatest of all gods' (*Que d'embrasser la plume & le divin pinceau/ devenez compagnon des plus grans Dieux du Monde*), see D'Heere 1569-72, fol. 6v.

¹⁰⁴⁶ Jan's brother was possibly Frans Mijneren who, together with Jan Wisschavens, was responsible for the elaborately ornate Jubé in the St Gummarus church in Lier between 1535-37, see Steppe 1952, pp. 100-4; Kavalier 2012, pp. 72-73.

¹⁰⁴⁷ Guicciardini 1581, p. 146; Van Mander 1604, fol. 255r.

in the Abbey of St Peter in Ghent, commissioned by Christian II of Denmark in 1526.¹⁰⁴⁸ The designs for the monumental tomb in the Antique style were provided by Jan Gossart and the alabaster tomb was to be sculpted by Jan de Smytere and his assistant Jan d'Heere (see chapter 2.4). After De Smytere's death in 1528, d'Heere finished the tomb. As an architect he was also involved in the design of Charles V's palace in Ghent situated within the Citadel in 1540, for which he was ultimately replaced by Jacques Du Broeucq.¹⁰⁴⁹ Among other commissions, the Ghent poet Marcus van Vaernewijck (1518-1569) also describes D'Heere's *Jubé* the Sint-Janskerk in Ghent, commissioned to celebrate the 23rd Chapter of the Golden Fleece in 1559.¹⁰⁵⁰ In 1560, Jan d'Heere was also one of the twelve competing members for the design of the new Antwerp town hall, ultimately designed by Cornelis Floris.¹⁰⁵¹ So despite Lucas d'Heere's origin from a renowned family of geometrical designers, sculptors and architects, the liberal art of geometry no longer played a defining part in his art theoretical writing of self-promotion. Floris and d'Heere were representatives of a new generation who distanced themselves from their predecessors and for whom painting was ennobled by its own terms without the aid of the liberal art of geometry. If the liberal arts were referred to it was mostly within the context of the familiar Horatian creed *Ut Pictura Poesis* and the Art of Rhetoric, as in D'Heere's writings or as in Lombard's search of artistic grammar.¹⁰⁵²

The effect of this paradigmatic shift in Netherlandish art theoretical thinking can best be seen in the oft-quoted court case of 1595 in which the Antwerp masons filed a complaint about the fact that the sculptor Raphael Paludanus refused to enlist his students in the mason's guild (*Vier Gekroonden*) as had been customary – since he worked in stone.¹⁰⁵³ Paludanus, son of the famous Antwerp sculptor Guiliam Paludanus, claimed that masonry is manual labour (*officio mechanico*), while sculpture as well as painting are to be considered as an art from (*Conste*). Therefore, his students should only be enlisted within the guild of St Luke. His claims were further supported by Cornelis Floris and Robert and Colyn De Nole. The masons on the other hand responded that they had never heard of the fact that sculpture was a member of the Seven Liberal Arts. If any professions should be considered an art, so they retorted, it would be architecture or masonry thanks to its use of geometry (*'geometria est Scientia mathematica consistens in terrae mensuratione'*). Although it was still the masons who won the case,

¹⁰⁴⁸ Deruelle 1942, pp. 74-91; Van Driessche 1990; Alsteens 2010; New York 2010, pp. 395-98, no. 108. The tomb was destroyed during the iconoclast riots in 1566.

¹⁰⁴⁹ These plans were based upon those for the Alcázar of Toledo and the Alcázar of Madrid, which had just been rebuilt by Alonso de Covarrubias. Copies of Covarrubias' plans of the Toledo and Madrid Alcázar were sent to Ghent to guide as examples, see Martens 2009, pp. 78-79. The citadel itself was designed by Donato de Bono. Ten years later, Du Broeucq made a wooden model for the intended palace. Hedicke 1912, p. 430; Roosens 2005, p. 314.

¹⁰⁵⁰ Van Vaernewijck 1574, p. 235. On the broader context of Van Vaernewijck in art historical theory, see Kleine Deters 2020.

¹⁰⁵¹ Kuyper 1994, pp. 156-58.

¹⁰⁵² Baxandall 1971; Miedema 1988.

¹⁰⁵³ Rylants & Casteels 1940; Filipczak 1987, pp. 16-17; Miedema 1980, pp. 78-79.

it does represent the quarrel between the old way of elevating architecture to the liberal arts through its use of geometry, versus the novel art theoretical thinking in which the *Arti del disegno* ought to be considered as noble or liberal, and far removed from manual labour. The sculptor's description of masonry as "rough and coarse work" clearly echoes Lampsonius' description of Metsys' thundering hammers as a blacksmith. This sort of rhetoric could not be further detached from the phenomenon of painters or printmakers who self-consciously signed with a mason's tool.

9.3. Conclusions

The transfer of geometrical design knowledge from a more traditional group of architectural designers to painters and early printmakers impacted the status associated with these latter practices. By displaying their geometrical knowledge, painters and early engravers were able to affiliate themselves with the liberal arts, as architects and goldsmiths previously had been able to do. Early Netherlandish printmakers working in the last half of the fifteenth century with personal or family roots as architectural designers and goldsmiths now exhibited their geometrical expertise by signing their works with house marks and production tools. Shortly afterwards the same strategy was used by painters with family roots in architectural design. They were not markers of mechanical labour but rather tools of social and intellectual emulation. This development is not unique for the Low Countries, and similar contemporary social strategies of signing with symbols of technical expertise occurred in Germany. Again, the German exemplar par excellence is Albrecht Dürer, whose recognisable A. D. monogram, like that of Schongauer before him, referred to the authenticating mark of goldsmiths.¹⁰⁵⁴ In his 1485 *Virgin and Child Enthroned with two Angels*, one of his earliest signed drawings which he still made while working at his father's goldsmith workshop, the Nuremberg artist signs with his initials – a capital A and small d - placed next to each other.¹⁰⁵⁵ Unlike the now so familiar Dürer trademark, the capital A is still triangular and consists of angular and sharp lines, much like many similar-shaped mason's – or goldsmith's marks. Despite the dominance of geometry in the Italian art theoretical discourse with artists such as Ghiberti, Uccello, Piero della Francesca or Leonardo, few examples can be found where this is reflected in signing method. Perhaps the only exception may be Jacopo de' Barbari, whose signature of Mercury's Caduceus may well be interpreted as a self-aware statement of the artist as a practitioner of the arts of Mercury, protector of sciences.¹⁰⁵⁶ The signature, which

¹⁰⁵⁴ Koerner 1993, pp. 203-5; Smith 2004, p. 67-8.

¹⁰⁵⁵ Berlin, Kupferstichkabinett, inv. KdZ 1. Strauss 1974, vol. 1, no. 1; Anzelewsky & Mielke 1984, p. 7, no. 1. On the development of Dürer's signature, see Burg 2013.

¹⁰⁵⁶ His idiosyncratic method of signing with a sign of the planetary children may have also influenced Lucas Cranach the Elder. Both were employed at the court of Frederik the Wise. Cranach's flying serpent can be interpreted as a symbol of Chronos, or his Roman counterpart Saturn; the planetary influence with which humanist intellectual artists such as also Dürer associated themselves, see Horký 2013, pp. 299-302.

appears in twenty-nine of his prints can be an indication of personal connection with mathematician Luca Pacioli and the artist's profound knowledge of geometry and triangulation methods (see chapter 3). When working at the court of Frederik the Wise at Wittenberg, de' Barbari was one of the first champions for the visual arts as a member of the liberal arts.¹⁰⁵⁷ His thinking not only influenced Dürer's opinion on this matter but probably had some impact in the Low Countries during his stay at the court of Margaret of Austria between 1510 and his death in 1516.¹⁰⁵⁸

This discourse in which geometry was applied to elevate the status of painting (and printmaking) as a learned discipline was able to profit from a more general art theoretical discourse present in European Renaissance thinking, inspired by Vitruvius' focus on geometrical skills. The increased interest and experience of visual artists in geometry was intensified and stimulated by a growing interest in these same fields by an urban humanist class who often operated within the same social circles as patrons to these artists. Urban humanists such as Pieter Gillis, Cornelis Grapheus, Willem of Heda, or Pomponius Occo in Amsterdam provided access to a more theoretical basis to justify geometrical knowledge in accordance with antique texts such as Vitruvius or Pliny the Elder.¹⁰⁵⁹ This theoretical background came to the surface in the previously discussed Utrecht court case in 1542, in which Willem van Noort referred to the authoritative voices of both Vitruvius and Alberti as evidence that the right to design architecture should not be restricted to the members of the mason's guild (see chapter 1). As mentioned earlier, these arguments were most likely instigated by the eminent Antwerp town clerk Cornelis Grapheus, who functioned here as secretary and witness to the court case. Grapheus was very familiar with both quoted authors since he wrote the introduction to Pieter Coecke's 1539 Flemish Serlio translation and had previously quoted Alberti when writing the introduction to the 1528 Antwerp edition of Pomponius Gauricus' *De Sculptura*, published by his brother Jan Grapheus.¹⁰⁶⁰ However, it is important to remember that this framework, based on antique and contemporary textual authority, only served to strengthen with theory a practice which had already developed independent from these sources. The notion that painters and printmakers proudly displayed their familiarity with geometry to present themselves as designer and artist was more the result of oral dissemination of geometrical knowledge between the existing guild structures, rather than directly stimulated by a reading of these authors. It was a social status which new designing professions such as painters and printmakers adopted from other professional groups who had

¹⁰⁵⁷ Kirn 1925; Ferrari 2006, pp. 61-62; Böckem 2016, pp. 170-76.

¹⁰⁵⁸ It was also when visiting Margaret's court that Dürer unsuccessfully requested the governess for the Jacopo's little book, which was of much interest for Dürer during his preparations of his own *Untermeynung*. Ashcroft 2017, vol. 1, p. 584.

¹⁰⁵⁹ Extremely relevant in this context is the passage in Pliny's *Natural History*, which accounts the life of Pamphilus, of who Pliny says that "he was the first painter highly educated in all branches of learning, especially arithmetic and geometry, without the aid of which he maintained art could not attain perfection". Pliny, XXXV, 76.

¹⁰⁶⁰ De Jonge 2007, p. 48; De Jonge 2017b.

previously used their arithmetic and geometrical knowledge as an instrument of social elevation. As shown in the 1542 court case, the theoretical backing did however work as a catalysator to further develop the idea of the painter as a learned artist thanks to his geometrical knowledge. Although the painter's and engraver's embrace of the liberal art of geometry as a social strategy to elevate their social position was quite a prominent strategy between 1480 and 1540, it was only short lived and by the middle of the sixteenth century it gave way to (Vasarian) imported ideas on the arts with a focus on *disegno* and *ingenio* rather than on the acquisition of geometrical knowledge. This was a gradual process and both attitudes were able to coexist during the first half of the century.

GENERAL CONCLUSIONS AND INTERNATIONAL CONTEXTUALISATION

The period treated in this study saw some of the most crucial changes in early modern history, including the emergence of printed texts and images, the embracement of new humanist intellectualism by the courtly and urban elite, and the introduction of a novel ornamental and architectural language. Each of these interrelated paradigmatic changes in the socio-cultural structure had its implications on the role of design in the early modern Netherlandish workshop practice.

The transition from the geometrical design complexities, characteristic of the later stage of the *modern* Gothic, towards a more modular architectural design practice of Vitruvian Orders of Renaissance architecture, as formalised by Serlio has often been regarded as a pivotal element in the liberation of the architectural design process from its secluded guild environments and the building lodge.¹⁰⁶¹ The alternative offered by the supposed coherent logic of Renaissance orders and structural formalities, as opposed to the complexities of gothic “ad quadratum” design methods has often been considered as a gateway for novel professional players such as painters or other educated non-specialists to practice architecture or boast with their knowledge of it. Although such a cultural process can hardly be denied to some extent, the influence of a humanist architectural framework should at least be nuanced. We have seen that the dissemination of architectural design techniques outside the traditional craft barriers in the Low Countries was already set-in motion well before the introduction of a formalised classical ornamental and architectural idiom. It was exactly during the heyday of geometrical complexity of *modern* Gothic and the intellectual wit associated with it that architectural knowledge was already disseminated to a generation of painters and printmakers working between 1480 and 1540. Rather than being a result of merely external factors – i.e., Renaissance architectural theory and the immigration of Italian architects – which were conflicting with the traditional guild systems and *modus operandi*, this dissemination of architectural and geometrical knowledge should primarily be considered as an internal process which took place within the professional urban guild structures.

An essential factor in the transmission of design techniques was the mobility inherent to design itself. Although attempts were made by the guilds to monopolize design by connecting the right and ability

¹⁰⁶¹ See for example: Carpo 2001; Bork 2011b, pp. 420-24.

to make designs and their accompanied drawings to certain crafts, design always has had the liberty to travel beyond those institutional boundaries. Geometrical design techniques were shared by all creative crafts; not only master masons but equally goldsmiths, brass workers, joiners, retable carvers, figure carvers, sculptors, or land surveyors. In the daily workshop practice these professional groups were not as strictly delineated as our present categorical thinking would expect them to be; on the contrary, the knowledge of geometry was the common denominator for this prosopographic group. They were called “the lovers of the arts”, in theoretical and practical treatises such as that of Roriczer or Schmuttermayer for their association with the Liberal Art of Geometry. By the late 1520s humanist painters such as Albrecht Dürer or Pieter Coecke van Aelst found the addition of their own professional group to this list of lovers of geometry.

The influence of painters on the visualisation and social position of architectural design as suggested in literature was far less impactful than that of traditional architectural designers on painters. The dissemination process of design knowledge was mainly initiated by the interplay between some crucial socio-professional changes in various segments of the Netherlandish art market. On the building market we are met with the end of a long process which involved the changing professional position and growing self-sufficiency of the architectural designer. Although this led to an increase of social status of the profession, it also made it more professionally exclusive. In addition, by the late 1520s and 1530s many of the major architectural prestige-projects such as new town halls, palaces of the Habsburg nobility or glamorous churches and cathedrals - which had provided a spectrum of possibilities to all artistic craftsmen of an urban environment - were either finished or left unfinished. Apart from the major military engineering projects funded by the Habsburg central government or a rare prestige project such as the Antwerp town hall, building activity in the Low Countries was at a low level in comparison to the previous century. This would only be picked up at the dawn of the seventeenth century, namely with a new building program of the Counter-Reformation in the south and to shaping of a new identity of the newly founded Republic in the north.¹⁰⁶² As also noted by Hurx, this left a professional vacuum for many of the renowned masons’ families such as the Keldermans or De Waghemakere.

Almost contemporary to this process, the commercial art market for painting and carved altarpieces started to boom in urban centres such as Antwerp, Mechelen or Brussels. It is not surprising to see that members of the Keldermans family, such as Rombout I and Laurys, gradually changed their occupation from architectural design to the painting of stained glass or retable carving. The last successful member of the family was Marcelis, who remained employed as a military engineer. Perhaps

¹⁰⁶² Martens 2009.

the Metsys family was even more successful than the Keldermans family, as Quinten would be able to launch a most successful career as one of Antwerp's leading and most innovative painters and create a future for the following generation with his sons Cornelis and Jan. The same rules of early modern socio-economic Darwinism can be applied to Lanceloot Blondeel or to the Floris family whose family lineage was able to continue being successful by adapting to the rapidly changing economic circumstances.

Though their socio-economic position was less threatened than that of their colleagues in the building trade, some goldsmiths seized commercial opportunities by starting a side business as an engraver or opening a painter's workshop. The early development of the print market, not unlike the opening of the market of paintings, also created opportunities for masons and goldsmiths which would not only generate an additional stream of income, but in addition created innovative marketing tools in order to display their craftsmanship. The early goldsmith-printmakers can be seen as essential intermediary players in the transmission of geometrical design knowledge into the more figurative arts. The career of Albrecht Dürer is often seen as the result of an artist's development as a novel Renaissance artist choosing to leave the family tradition of craftsmen goldsmiths for that of an intellectual artist, yet his career choices may have been more pragmatic. Although being the best-documented and most prominent case, his career track from goldsmith to that of a printmaker and eventually a painter was part of a broader European social pattern which we also find in the Low Countries in the careers of Alart Du Hameel, Johan Van den Meyneste or Jan Rombouts. If we accept the possibility that Jacob Cornelisz. Van Oostanen may have had a professional background as a woodcarver or ornamental sculptor before applying his talents to the cutting of woodblocks. The evolution of the Amsterdam painter from woodcarver to printmaker and finally well-respected painter, equally fits this social pattern.

The fact that the new generation of painters, active between 1500 and 1540, shared a technical background rooted in geometrical design principles, trigonometry and triangulation opened a world of new opportunities for this professional group, which included the development of geometrical linear perspective, commissions in micro-architectural projects and particularly it particularly gave them an instrumental role in the burgeoning field of cartography. While painters had been involved in cartographic projects in the past – similar to their architectural drawing contributions – it encompassed mostly aesthetic and 'painterly' representations; they were unconcerned by orientation, scales or any sense of measurement. However, for this new generation of painters with a solid geometrical background, their hereditary skill set enabled them to combine their painterly skill, with a sense of accuracy so that painters such as Pourbus and Van Scorel were no longer to be contracted merely for their artistic input but could equally function as knowledgeable land-surveyors. This brotherhood of

art and science resulted in an increased cartographic accuracy. On a socio-cultural level this generated a close-knit social network in which painters, engravers, humanists, and cartographers would benefit from each other, eventually culminating in the erudite social group around Ortelius.¹⁰⁶³

The professional shift from either goldsmith or sculptor/mason to that of the visual arts had a considerable impact on the professional and social position of the painter during the first half of the sixteenth century. Along with the painters' inheritance of geometrical knowledge also came the social legacy which the professional group of architectural designers was able to pride itself upon. The fifteenth century already saw an increase in status of both architects and goldsmiths, both through their acquired capital in the building trade or the precious material they were working with, but also for their expertise as geometrical designers.¹⁰⁶⁴ Architectural drawing practice in its widest sense (thus including architectural carpentry, applied arts and sculpture) had undergone some noticeable changes in terms of its scientific approach to representation methods which included a stronger systematic focus on the arithmetic and geometrical basis for these drawings. The pride and status of this geometrical know-how was carried over to other professional groups. As a visual statement, the masons-turned-painters, masons-turned-engravers or goldsmiths-turned-engravers appropriated the traditional family house-mark within their new professional workshop practice. Whereas goldsmiths, cabinet makers or masons legally were required to mark their work with their house-mark, the new generation of painters 'marked' their work out of free will, even when this was not required by St Luke guild regulations. This was not merely a symbol of personal pride or identification, but rather as proof of their geometrical expertise, which was often deeply rooted in family design tradition. This young generation of painters did not only transfer the house-mark tradition, but equally took pride in portraying themselves as proper artists in their workplace, often in combination with an ostentatiously placed house-mark, as in Van Oostsanen's case.

Stimulating in the changing social position of the painter as an expert in geometry were the urban and courtly humanist networks with which these artists surrounded themselves; scholars, writers, and secretaries the likes of Gerard Geldenhouwer, Pieter Gillis, Grapheus, Gemma Frisius or Pompeius Occo. Many of them were employed by or had close ties to noble patrons such as Henry III van Nassau, Philip of Burgundy, or Antoine of Lalaing. These courtly figures valued the importance of geometry and architecture by their personal interest or were captivated by the general humanist vogue which engulfed the Habsburg court. These influential humanists personally encouraged the geometrical design practice but also dressed it up in Antique attire - not unlike the Antique ornamented bishop's crozier modelled on a *modern* Gothic traditional structure. They made the

¹⁰⁶³ On the network of Ortelius, especially see Meganck 2015.

¹⁰⁶⁴ Hurx 2018, p. 363.

interdisciplinary freedom of geometrical design as it had been used by generations of diverse craftsmen look fresh and new, by associating it with Vitruvius and antique values of the arts. This is also how we should interpret the addition of Grapheus to the 1542 court cases: as dressing up tradition in antiquity's toga of erudition. This humanist backing of what was mostly an internal workshop phenomenon was crucial to boost the self-image of the geometrically knowledgeable new type of painter. Only this cultural climate would enable the next generation – the school of Lombard, Lamponius and Vasari- to consider *painting* and *disegno* as an individual liberal art, removed from the shackles of tradition. The emancipative role played by geometry as a liberal art, should be seen alongside the artistic alliance with the arts of the trivium (particularly *Rhetorica*), which was embraced and supported by same urban humanist networks.

Equally important to the connections with urban and courtly humanist figures, were the networks between the early learned artists themselves. Whereas the first geometrically trained painters often obtained their knowledge in hereditary manner, they themselves passed on the importance and applications to a following generation. Such was the case with Blondeel and Pourbus. Jan Van Scorel fits this pattern just as well. Trained in the workshops of Van Oostanen, Gossart and perhaps even temporarily by Dürer, Van Scorel can be considered to have been trained in a series of painter's workshops where the importance of geometrical (and in extenso architectural) knowledge had become a key didactic feature. The contact with Italian artists in the Low Countries or the acquaintance of these artists with the writings of Vitruvius or, to a lesser extent, Alberti was certainly stimulating in this development, but should be considered as grist to the mill of an already ongoing development of which the genesis lies in the socio-economic market situation rather than in art theoretical discourses. Both Vitruvius and Alberti confirmed versatility and importance of geometry in this development, not as novelty but rather as common practice of any proper artist. Surely, Jan Gossart and Jan van Scorel were not left untouched in their artistic thinking by their stays in Rome but had already been aware of the status-elevating authority and the wide range of applications either through their family background or training.

Within a wider European context, it is interesting to notice that the socio-professional pattern studied here, took place about a century earlier in the Florentine artistic circles.¹⁰⁶⁵ In this context as well, it is no coincidence that it that mostly goldsmiths and master masons such as Andrea Pisano, Brunelleschi, Donatello, and Ghiberti would be the first to set the rules for linear perspective, based upon their family tradition experience with fundamental Euclidean principles. Here too, the moment of self-portraiture occurs firstly by the hands of goldsmiths on the Florence Baptistry doors, before this

¹⁰⁶⁵ For geometry and Italian art, particularly see Kemp 1990, Field 1997b; Field 2005.

would be echoed by a generation of self-confident painters. A whole generation of Quattrocento painters such as Andrea del Verrocchio, Sandro Botticelli, Domenico Ghirlandaio had been initially trained as goldsmith, but found a profitable alternative business model in the booming market for paintings, often exploiting their knowledge of fashionable ornamentation and geometrical know-how. In the family tree of the Pollaiuolo brothers, we witness a similar strategic professional diversification such as were discussed with goldsmith families such as the Coignet family in the low countries. Antonio (1429-1498) was able to combine the family profession as a goldsmith with that of painter and engraver, while his brother Piero established a prosperous painting studio.¹⁰⁶⁶ Also similar to what would later occur in the Low Countries is the role of humanists at local courts in Florence, Urbino, Mantua and Padua to stimulate the elevation of the artists through the fundamental knowledge of geometry. The most influential Italian humanist in this respect was, of course, Leon Battista Alberti whose *On Painting* (1435) opens with a basic crash course on Euclidean geometry, and which is dedicated to Brunelleschi. Alberti's treatise encouraged other painters such as Uccello to take an active interest not only into perspective but into geometry in general. The humanist interest in geometry and perspective probably also stimulated Piero della Francesca, born in a noble Tuscan family, to follow a career in mathematics, geometry, and painting.¹⁰⁶⁷ The role played by Alberti in this process of status elevation and the redefinition of the artist through geometrical knowledge, is similar to that of humanists such as Grapheus in Antwerp or Willibald Pirckheimer in Nuremberg, who both stimulated the dissemination of architectural and geometrical discourse.

Misleading terms such as “painter-architect”, “sculptor-architect”, “peintre-graveur” or “painter-inventor” each suggest an underlying conflict between two professional groups which never were as contradictory as these neologisms seem to suggest. When considering early modern design practice, such categories limited to professional groups obstruct us from seeing the larger context and particularly the relations between various arts. For the generation here under consideration, many of the painters who designed architecture or architectural sculptural projects, were doing so thanks to the experience gained through long lasting family traditions in mason- and/or goldsmith guilds. They were not painters who suddenly got involved in architectural practice, but rather the opposite. These designers can be considered as the bridging generation between the complexity of geometrical *modern* Gothic design practice and the simplified classical ordering of Antique architecture.

The 1560s (where the scope of the present study ends) heralds a new era in the development of architectural design and the formalisation of the relationship between painters, architects, and sculptors, with Hans Vredeman de Vries perhaps as the most exemplary figure. The socio-professional

¹⁰⁶⁶ Wright 2005.

¹⁰⁶⁷ Field 2005.

process of professional diversification within one career or within family relationships is continued well into the late seventeenth century with the careers of Pieter Post, Jacob Van Campen or the Vinckboons family in the North or Wenzel Coberger, Jacques Francart or the Quillinus family.

In several respects, this study was able to touch upon the interplay between the different crafts involved in geometrical design techniques and it offers a steppingstone for future interdisciplinary research. Many promising areas for future inquiry have been left open or have only been able to have been treated marginally, such as the role of the design of stage decorations for urban festive events such as Rhetorician contests or Joyous entries. The design of these ephemeral architectural structures increasingly relied upon the same painters with an architectural background which were treated in this study, including Quinten Metsys, Lanceloot Blondeel, Jan d'Heere, Pieter Coecke van Aelst or Jan Rombouts. Also, a more in-dept study of the relationship between painted representations of architecture and the dissemination of architectural theory among Netherlandish painters is called for. Despite these and many other lacunae, this study intended to offer a new interdisciplinary model by looking at prosopographical patterns through which workshop culture and architectural design practice can be studied; a model which perfectly can be applied beyond the early sixteenth-century Netherlandish context.

List of Archival Abbreviations used in the footnotes

AEM	Archives de l'État de Mons
ARAB	Algemeen Rijksarchief Brussel
HUA	Het Utrechts Archief
KAA	Kathedraalarchief Antwerpen
KBB	Koninklijke Bibliotheek van Brussel
SAA	Stadsarchief Antwerpen
SAB	Stadsarchief Brugge
SAL	Stadsarchief Leuven
SAM	Stadsarchief Mechelen

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NEDERLANDSTALIGE SAMENVATTING

Dit onderzoek focust op de relatie tussen de architecturale ontwerppraktijk en de beeldende kunsten in de Nederlanden in de periode 1480-1560. Deze cruciale periode op het snijvlak tussen traditie en vernieuwing, kenmerkt zich door een grotere betrokkenheid van andere ambachten of beroeps categorieën in de architecturale ontwerppraktijk, zoals schilders, prentmakers en beeldhouwers. Als centrale vraag binnen dit onderzoek worden de verschillende onderliggende socio-economische mechanismen onderzocht die aan dit proces ten grondslag liggen. Waar er in de eerdere historiografische traditie vooral antwoorden gezocht werden in externe factoren (humanistische architectuuropvattingen via de verspreiding van Vitruvius-edities of de aanwezigheid van Italiaanse schilders-bouwmeesters) wordt er in dit onderzoek vooral gekeken naar de interne processen binnen de stedelijke vroegmoderne gildestructuren die zorgden voor de verspreiding van architecturale en geometrische kennis. Het methodologische opzet van dit onderzoek is om op een interdisciplinaire wijze de kennis van de vroegmoderne ontwerppraktijk te verbinden met een ruimere onderzoekstraditie naar de stedelijke atelierpraktijk en kunsttheoretische inzichten tijdens de eerste helft van de 16^{de} eeuw.

In een vaak aangehaalde rechtszaak die plaatsvond in Utrecht in het jaar 1542 wordt de architect en schrijnwerker Willem van Noort ervan beschuldigd door steenhouwer en beeldhouwer Jacob van der Borch dat hij geen recht had op uitbetaling als ontwerper van een niet nader bepaalde architecturale opdracht, omdat – zo beweerde van der Borch – enkel leden van de metsers- en steenhouwersgilde recht hadden op het aanleveren van ontwerpen. In Van Noorts tegenargument traden verschillende getuigen naar voren die beweerden dat het reeds lang gebruikelijk was voor andere ambachten om architecturale ontwerpen aan te leveren, zonder dat zij hiervoor aangesloten moesten worden bij het gilde van de Vier Gekroonden (metsersgilde). Als extra ondersteuning werd in het pleidooi gebruik gemaakt van citaten uit zowel Alberti als Vitruvius. Met deze rechtszaak als leidraad, wordt onderzocht aan de hand van architectuurtekeningen, leercontracten en gildebepalingen in welke mate het ontwerpproces kon worden geclaimd door één gilde of ambacht.

Hieruit blijkt dat het ontwerp vooral een ambachts-overschrijdende rol heeft. Dit is geen innovatie die haar oorsprong vindt in de 16^{de} eeuw dankzij de introductie van humanistische architectuurtraktaten of de influx van Italiaanse architecten. Zowel leercontracten in de gilden als de gilderegulaties bieden weinig tot geen info over de verantwoordelijkheid van de ontwerper. Uit verschillende contracten van schrijnwerkers, goudsmeden of beeldhouwers blijkt dat de verantwoordelijkheid voor ontwerp verschilt van opdracht tot opdracht. De belangrijkste factor in geschiktheid als ontwerper is vooral een gedegen kennis van geometrie, die de basis vormt voor elk type ontwerp van enige architecturale aard. Dit laatste omvat niet enkel grootschalige projecten maar ook micro-architectuur zoals tabernakels, monstransen, maaswerk, preekgestoelte of sacramentstorens. Een grote groep van vroegmoderne ambachtslieden zoals metsers, houtbewerkers, schrijnwerkers, beeldhouwers en goudsmeden deelden deze geometrische kennis en vormden samen de basis voor de ontwerppraktijk.

Een opmerkelijke nieuwe tendens aan het begin van de 16^{de} eeuw was de overdracht van deze geometrische ontwerp kennis van deze brede prosopografische groep naar het schildersatelier. Minder dan tot nog toe in de literatuur wordt aangenomen was dit de invloed van een nieuwe humanistische visie om ontwerp, maar eerder lag er een interne sociaal-professionele verschuiving aan de basis van

deze ontwikkeling. Het is opvallend dat de meeste schilders die tijdens de eerste helft van de eeuw actief betrokken waren bij architecturale opdrachten, ook een sterke familieband hadden met eerder besproken ambachtslieden die diepgeworteld waren in de geometrische ontwerppraktijk. Schilders zoals Lanceloot Blondeel, Quinten Metsys, Jan Gossart, Frans en Cornelis Floris, Lucas d'Heere of Jan Rombouts hadden allen vaders die actief waren als metsers, steenhouwers of goudsmid en die hiermee de basis legden voor het belang van geometrie in het schildersatelier. Hoewel er tijdens de 15^{de} eeuw al enkele voorbeelden te vinden zijn van schilders met een actieve interesse in geometrie en de architectuurpraktijk, kunnen we vanaf het begin van de 16^{de} eeuw spreken van een sociaal-professioneel patroon. Eén van de beargumenteerde oorzaken hiervoor is dat de strategische distributie van talent over verschillende ambachtsgroepen een groot voordeel opleverde voor artistieke dynastieën bij het toekennen van opdrachten. Bovendien zorgde een veranderende markt voor schilderijen (voornamelijk in Antwerpen) in samenloop met een toenemende professionalisering van een steeds competitievere architecturale ontwerppraktijk ervoor dat telgen uit ontwerpende beroepen in sterkere mate kozen voor een carrièrewissel.

De overdracht van geometrische kennis naar de schilderpraktijk wordt aangetoond aan de hand van het schetsboek (1520-1533) uit het atelier van de Amsterdamse schilder Jacob Cornelisz. Van Oostzanen. Ongeveer één derde van de tekeningen in dit vroegst gekende schetsboek uit de Nederlanden is gerelateerd aan architecturale ontwerpstudies. Dit kan gaan om studies naar vernieuwend *antiecs* ornament, maar ook om studies naar perspectiefrasters, polyhedra of een tekening van een bundelpijler waarbij gebruik wordt gemaakt van de Ad Quadratum-methode die voordien vooral gebruikt werd door mesters, steenhouwers en goudsmiden.

De geometrische projectiemethoden en ontwerptheorie werden door schilders ook actief gehanteerd bij hun betrokkenheid bij grootschalige cartografische projecten. Hoewel er in het verleden ook vaak een beroep werd gedaan op schilders bij de productie van militaire of juridische kaarten, is er een duidelijke verschuiving merkbaar in de rol die zij hierin speelden. Niet enkel werd er gebruik gemaakt van hun picturale kwaliteiten, maar in toenemende mate traden schilders zoals Lanceloot Blondeel, Pieter Pourbus, Jan van Scorel Willem Croock of Cornelis Anthonisz. ook naar de voorgrond als landmeters en werden hun kaarten vaak voorzien van een vermelding van de exacte meetbaarheid en het beroep dat gedaan werd op hun geometrische kennis. De verklaring die wordt geboden is tweeledig. Enerzijds konden schilders als Blondeel terugvallen op de in het voorgaande hoofdstuk besproken erfelijke kennis. Anderzijds bestond er een actieve wisselwerking met de ontwikkelingen in de driehoeksmeetkunde en triangulatie die gelijktijdig plaatsvonden in het academische netwerk rondom Gemma Frisius aan de Leuvense universiteit.

Communicatie van ontwerp gebeurde niet enkel via architectuurtekeningen, traktaten of via een erfelijke orale familietraditie, maar vanaf het laatste kwart van de 15^{de} eeuw speelden ook losse prenten een niet te onderschatten rol in de distributie van nieuwe stijlen en ontwerptechnieken. Aan de hand van de zgn. Prevedari-prent, naar ontwerp van Bramante wordt aangetoond dat dergelijke losse prenten een grote invloed hadden op de ontwikkeling van een nieuwe antieke utopie en de ornamentale vormtaal aan het begin van de 16^{de} eeuw, voornamelijk in Antwerpen. Daartegenover staat een schilder als Jan Gossart die hoofdzakelijk in de context werkt van de hoven van Philips van Bourgondië en Hendrik III van Nassau. Omwille van een humanistische omgeving en een direct contact met de antieke architectuur wordt er een veel meer antiquarische vorm van antieke stijl tot ontwikkeling gebracht, die evenzeer schatplichtig was aan Bramante.

De vroege prentkunst speelde niet enkel een grote rol bij de verspreiding van nieuwe stijldiomen, maar ze was ook cruciaal voor de ruimere verspreiding van geometrische ontwerpprincipes. Aangezien de meeste eerste graveurs in hoofdzaak goudsmeden waren, werd dit nieuwe medium al snel ook ingezet voor de productie van gravures waarbij pinakels, monstransen, kelken of andere vormen van vooral gotische micro-architectuur het onderwerp waren. In de Nederlanden was dit vooral de anonieme goudsmid die in de literatuur doorgaans wordt aangeduid met de noodnaam Meester W met de sleutel. Een ander interessant voorbeeld is Alart Du Hameel, bouwmeester uit 's Hertogenbosch, die enkele van zijn ontwerpen verspreidde aan de hand van grootschalige gravures. Niet alleen zorgden deze ontwerpen voor een breder gamma aan beschikbare modellen voor collega goudsmeden, schrijnwerkers, houtsnijders of steenhouwers, maar bovendien voorzagen zij deze gravures vaak van geometrische doorsneden waardoor achterliggende ontwerpmatigheden duidelijk en te dupliceren werden. Omwille van een groeiende interesse in geometrie vonden deze prenten ook in toenemende mate een afzetmarkt bij de vroege verzamelaars van prentkunst in Europa. Omwille van hun traditionele achtergrond in de architectuur of goudsmeedkunst enerzijds, en hun toenadering tot de beeldende kunsten via de prentkunst anderzijds hadden deze vroege prentmakers een essentiële intermediaire functie in de transmissie van ontwerp-kennis.

De verspreiding van technische en geometrische kennis naar andere ambachten had ook grote gevolgen voor de veranderende sociale status van schilders aan het begin van de zestiende eeuw. Zowel architecten als goudsmeden genoten tijdens de 15^{de} eeuw reeds een grote maatschappelijke status. Dit was niet enkel omwille van de vaak grote welvaart die vergaard werd door grote opdrachten, maar ook hun associatie met de vrije kunst van de geometrie. In eigentijdse bronnen worden deze ontwerpers voortdurend geprezen omwille van hun *scientie*, *contelijkheid* of *ingenium*. De status van geometrische ontwerpers wordt ook gereflecteerd in het zelfbeeld dat deze kunstenaars veruitwendigden. Zowel architecten als goudsmeden behoorden tot de eerste sociale groep uit de werkende klasse die zichzelf uitgebreid lieten portretteren, vaak in combinatie met passers, winkelhaken of andere zelfbewuste verwijzingen naar hun bekwaamheid in de vrije kunst van de geometrie. Wanneer deze geometrische ontwerp-kennis werd overgenomen door een nieuwe generatie schilders, werd ook dit grote sociale bewustzijn overgenomen. Niet alleen vroege graveurs met wortels in de goudsmeedkunst gingen hun prenten signeren met een prominent gebruik van een huismerk, maar ook schilders met familiale wortels in diezelfde traditie behoorden tot de eersten binnen hun beroepsgroep die hun werken signeerden, vaak met een expliciete verwijzing naar hun achtergrond in een geometrisch beroep. Zo signeerde Blondeel bewust met een truweel als verwijzing naar een verleden als metsers, en ook Quinten Metsys gebruikte soms een huismerk of klein hamertje om zijn origine als smid te accentueren.

Het was in de eerste plaats dankzij deze generatie schilders en hun expliciete associatie met de geometrie als onderdeel van de *Artes Liberales* dat de schilderkunst in de Nederlanden zich voor het eerst wist te ontwikkelen als vrije kunst. In de loop van de zestiende eeuw is de aard van dit discours geleidelijk gewijzigd en kunsten uit het Trivium (m.n. Retorica) werden meer ingezet in de kunsttheoretische debatten met betrekking tot de status van de schilderkunst. De origine van deze kenterende attitude ten opzichte van de sociaal verheffende rol van de geometrie is te terug te voeren tot het humanistische netwerk rondom Lampsonius en Lambert Lombard, waar deze visie van Giorgio Vasari snel de bovenhand haalde. Dit werd snel overgenomen door een volgende generatie schilders (Frans Floris, Lucas d'Heere), actief in de jaren 1540 en 1550, waarvan sommigen ook waren opgeleid in het Luikse atelier van Lombard. Het portret van Quinten Metsys in Lampsonius' portrettenreeks van

beroemde kunstenaars is misschien nog het mooiste voorbeeld van deze nieuwe attitude. In de begeleidende verzen bij dit portret wordt de lezer duidelijk gemaakt dat de zachte penseestreken van de schilders edeler zijn dan de donderslagen van hamer en aambeeld, en dat deze Apelles zich gelukkig mocht prijzen ontsnap te zijn aan de smidse van Vulcanus. Dit stond echter haaks op de wijze waarop Metsys zichzelf verkoos te profileren als geboren onder het gesternte van Mercurius.

CURRICULUM VITAE

Oliver Kik (1984) studied art history at the University of Ghent and obtained a masters degree in 2008 (*summa cum laude*). In 2010 he graduated from the *Art History of the Low Countries in its European Context* research masters program at Utrecht University. Shortly after completion of this second master he enrolled in a PhD program, with the financial support of the FWO, at Leuven University and Utrecht University, under the supervision of Krista De Jonge and Konrad Ottenheim. During this time, he has also worked at *Musea Brugge* and the Rubenianum Study Centre in Antwerp. He is currently responsible for old master prints and drawings at the Brussels auction house Arenberg Auctions.

Selection of Publications:

“Mark(et)ing Expertise: The goldsmith-engraver in the Low Countries and the use of house marks”, in: *Placing Prints: New developments in Print research 1400-1800* (Leiden, Brill, 2021), *Forthcoming Spring 2021*.

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