THE SALA BOLOGNA IN THE VATICAN PALACE:
ART AND ASTRONOMY IN COUNTER REFORMATION ROME

by

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ABSTRACT OF THE DISSERTATION

The Sala Bologna in the Vatican Palace: Art and Astronomy in Counter Reformation Rome

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This dissertation examines the ceiling fresco of the Sala Bologna in the Vatican Palace commissioned by Pope Gregory XIII in 1575. Portrayed on the vault is an uninterrupted view of the entire celestial sphere with each constellation represented in allegorical form and accurately placed with relation to one another. Each aspect of the ceiling’s iconography is explored in detail, including the frieze of mythical gods and ancient astronomers painted in the curves of the vault below. I also consider the relationship between this celestial fresco and the terrestrial maps of Bologna painted on the lower walls of the room. Through an interpretation of the room as a single decorative program, I establish that the imagery of the Sala Bologna visually demonstrates Gregory XIII’s use of empiricism to further his Post-Tridentine goals of Catholic reform. Moreover, it is my belief that this ceiling asserts the temporal and spiritual claims of the Church in a language that anticipates the increasingly important role of empirical science for the seventeenth-century papacy.

The second goal of this dissertation is to contextualize the astronomical ceiling of the Sala Bologna within the tradition of celestial iconography. Although individual astrological frescoes have been explored in previous scholarship, there has been no explanation for the popularity of this imagery in the Renaissance and Baroque periods. By discussing over thirty
celestial murals, I highlight several major themes and provide insight into the motivation behind the commission of this type of decoration.
Acknowledgements

In many ways this project began in the spring of 2003 when I studied abroad in Rome as an undergraduate at the University of Washington. Working with the wonderful Dr. Jeffrey Collins I became captivated with the ceiling frescoes of the Roman Renaissance and Baroque and learned that contemporary astronomy often played a significant role in these commissions. The two seemingly disparate subjects of art and science have always been among my greatest interests, and I was delighted to find a way to bring them together. This time in Rome triggered an interest that would eventually lead to my dissertation, and it also impacted the way I approach art, and in many ways, life itself.

During the course of this project I have had the great fortune of meeting and working with several scholars and colleagues who have helped shape my dissertation as well as my academic career. I hope I can demonstrate my immense gratitude by thanking them here.

As a graduate student at Rutgers I have had the incredible privilege of working with Dr. Tod Marder as an advisor. During his joint seminar with Dr. John Pinto I first studied the Sala Bologna and was encouraged to pursue the topic for my dissertation. Since then Dr. Marder has guided me with unfailing enthusiasm and advice. He has also provided me with seemingly endless support, both academic and moral, for which I will always be indebted. I am lucky to be able to call him a mentor and friend.

In my first years at Rutgers I worked closely with Dr. Catherine Puglisi, and she has continued to be an inspiration for my work. I would also like to thank Dr. Sarah Blake McHam and Dr. Erik Thunø, both of whom have provided advice and encouragement in seminars and beyond.
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While working on my dissertation I was able to contribute to the monograph *La Sala Bologna nei Palazzi Vaticani: Architettura, cartografia e potere nell'età di Gregorio XIII* (Marsilio, 2011). During this project I was taken under the wing of Dr. Nadja Aksamija and I will be forever grateful for her support and immense kindness. She has become an academic role model and I continue to be encouraged by her. Among the other scholars who contributed to the book I must single out Dr. Francesco Ceccarelli, Dr. Francesca Fiorani, and Dr. Maria Teresa Sambin de Norcen for their advice and willingness to share archival materials with me. The new and detailed photographs of the Sala Bologna provided by Factum Arte have been indispensible for my iconographical analyses of the room, and I thank Adam Lowe for sharing these images with me before their publication.

In 2010 I presented a paper at the seventh annual conference on the Inspiration of Astronomical Phenomena (INSAP) and was able to share my ideas and learn from an academic astrological community. It was there that I met Darrelyn Gunzburg, to whom I am indebted for assistance on various astrological questions and problems. In addition to providing horoscopic charts and calculations, she has shared her knowledge and ideas with me, and several of my conclusions would not have been possible without her.

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The Warburg Institute Photographic Index in London was critical to my early research, as it was there that I found many astrological frescoes for which to compare the Sala Bologna. I am grateful to the kind support of the staff, particularly Paul Taylor.

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**Table of Contents**

Abstract ii  
Acknowledgements iv  
Table of Contents viii  
Abbreviations ix  
List of Illustrations x  
Timeline xxii  

Introduction 1  

**Chapter 1: The Boncompagni Papacy, the Holy Year of 1575, and the Commission of the Sala Bologna** 14  
Part I: The Post-Tridentine Jubilee of 1575 15  
Part II: The Cortile di San Damaso and the Commission of the Sala Bologna 19  

**Chapter 2: Mapping the Heavens: The Ceiling of the Sala Bologna** 36  
Part I: The Artists 36  
Part II: A Map of the Universe: The Iconography of the Ceiling 48  
Part III: History and Mythology of the Celestial Sciences: The Quadratura Figures 76  
Part IV: The Quadratura 119  

**Chapter 3: Religion, Science, and Gregory XIII: The Decorative Program of the Sala Bologna** 124  
Part I: Maps, Allegories, and Emblems: The Wall Frescoes 125  
Part II: Regional Heritage, Territorial Control, and Papal Goals 146  

**Chapter 4: A Glimpse of the Stars: Celestial Murals in Early Modern Italy** 181  
Part I: The Tradition of Celestial Iconography 189  
Part II: Bringing the Heavens Inside: Renaissance Celestial Murals, 1300-1700 194  
Part II: The Ceiling of the Sala Bologna 236  
Part IV: Manipulating the Heavens: The Use of Celestial Iconography in the Renaissance 248  

Appendix 1: Constellations of the Sala Bologna and Iconographic Descriptions 252  
Appendix 2: Extant Celestial Murals in Italy, 1300-1700 307  
Appendix 3: Archival Documents 312  
Appendix 4: Glossary of Astrological Terms 314  
Appendix 5: Gregory XIII's Horoscopes 320  

Bibliography 323  
Illustrations 385
Abbreviations


ANS: American Numismatic Society

AFMV: Archivio Fotografico dei Musei Vaticani
ASBo: Archivio di Stato di Bologna
ASMV: Archivio Storico dei Musei Vaticani
ASR: Archivio di Stato di Roma
ASV: Archivio Segreto Vaticano
BAV: Biblioteca Apostolica Vaticana
UniBo: University of Bologna

b: Busta
CI: Camerale I
DG: Depositeria Generale
GT: Giustificazioni di Tesoreria
F: Fabbriche
f: folio
TS: Tesoreria Segreta di Gregorio XIII
List of Illustrations

Fig. 1  Ceiling of the Sala Bologna
Fig. 2  Vault of the Sala Bologna
Fig. 3  North and east walls of the Sala Bologna
Fig. 4  South and east walls of the Sala Bologna
Fig. 5  North and west walls of the Sala Bologna
Fig. 6  South and west walls of the Sala Bologna
Fig. 7  South wall of the Sala Bologna with the city of Bologna and Decretal scenes
Fig. 8  West wall of the Sala Bologna with the countryside of Bologna
Fig. 9  North wall of the Sala Bologna with a perspectival view of Bologna and the allegory of Bononia
Fig. 10 East wall of the Sala Bologna
Fig. 11 Giovanni Battista dei Cavalieri, Opening of the Holy Door, 1575, engraving
Fig. 12 Papal medal honoring Gregory XIII showing the opening of the porta sancta, 1575
Fig. 13 Pietro de’ Nobili, The Seven Churches of Rome, 1575, engraving
Fig. 14 Marc’Antonio Ciappi, Portrait of Gregory XIII, 1595, engraving
Fig. 15 Aerial view of the Cortile di San Damaso
Fig. 16 Exterior of the Cortile di San Damaso
Fig. 17 Étienne Dupérac, View of Rome, 1577, engraving
Fig. 18 Antonio Tempesta, Translation of the Relics of St. Gregory Nazianzus, 1580, fresco, Terza Loggia
Fig. 19 Giovanni Guerra, Piazza of St. Peter’s and the Vatican Palace, 1588, fresco, Terza Loggia
Fig. 20 Interior of the Prima Loggia, 1575
Fig. 21 Detail of a vault in the Prima Loggia, 1575
Fig. 22 Interior of the Seconda Loggia, 1576
Fig. 23  Ceiling of the Seconda Loggia, 1576

Fig. 24  Paul Letarouilly, plan of the Seconda Loggia, 1857

Fig. 25  Ceiling of the first Sala dei Foconi, 1576, fresco, Seconda Loggia

Fig. 26  Ceiling of the second Sala dei Foconi, 1576, fresco, Seconda Loggia

Fig. 27  Ceiling of the first Saletta dei Foconi, 1576, fresco, Seconda Loggia

Fig. 28  Ceiling of the second Saletta dei Foconi, 1576, fresco, Seconda Loggia

Fig. 29  Cappellina Comune, 1576, Seconda Loggia

Fig. 30  Ceiling of the Cappellina Comune, 1576, fresco, Seconda Loggia

Fig. 31  Interior of the Terza Loggia, 1580

Fig. 32  World maps in the Terza Loggia, 1580

Fig. 33  Martino Longhi il Vecchio, plan for the Pianterreno, 1574, pen and watercolor (Accademia Nazionale di San Luca, Fondo Mascarino, 2480)

Fig. 34  Martino Longhi il Vecchio, plan for the Terza Loggia, 1574, pen and watercolor (Accademia Nazionale di San Luca, Fondo Mascarino, 2481)

Fig. 35  Paul Letarouilly, plan of the Terza Loggia, 1857

Fig. 36  Sala delle Congregazione, Terza Loggia

Fig. 37  Plan of the Sala Bologna

Fig. 38  View of the exterior of the Sala Bologna

Fig. 39  View from the northern windows in the Sala Bologna

Fig. 40  View of the vault in the Sala Bologna

Fig. 41  Corner vault of the Sala Bologna: SVMMA // RELIGIO

Fig. 42  Corner vault of the Sala Bologna: PACIS // CON / SER / VA / TOR

Fig. 43  Corner vault of the Sala Bologna: PROVI / DENTIAE

Fig. 44  Corner vault of the Sala Bologna: OB // AN / NONÆ // COP / IAM

Fig. 45  Marble floor of the Sala Bologna
Fig. 46 Photograph of the Sala Bologna, 1908

Fig. 47 Photograph of the cracks in the vault of the Sala Bologna, 1934

Fig. 48 Photograph of the restoration of the ceiling in the Sala Bologna, 1934

Fig. 49 Photograph of the restoration of the ceiling in the Sala Bologna, 1934

Fig. 50 Detail of the constellation Boötes on the ceiling of the Sala Bologna

Fig. 51 Photograph of the giornate in the vault of the Sala Bologna, 1939

Fig. 52 Factum Arte photographic campaign of the Sala Bologna in 2011

Fig. 53 Processing of the facsimile of the Sala Bologna’s south wall in Factum Arte’s Madrid lab, 2011

Fig. 54 View of the facsimile of the Sala Bologna’s south wall installed in the Museo della Storia di Bologna, in Bologna, 2011

Fig. 55 Giovanni Antonio Vanosino da Varese, Ecumenical Council, 1565

Fig. 56 Giovanni de’ Vecchi, ceiling of the Sala del Mappamondo, 1564, fresco, Palazzo Farnese, Caprarola

Fig. 57 Sala del Mappamondo, 1565, Palazzo Farnese, Caprarola

Fig. 58 Altemps Globe, c. 1567, Vatican Museums

Fig. 59 Lorenzo Sabatini, preparatory sketch for the figure of Theut, c. 1575, Hessisches Landesmuseum, Darmstadt, Inv. AE 1533

Fig. 60 Lorenzo Sabatini, preparatory sketch for the figure of Atlas, c. 1575, Hessisches Landesmuseum, Darmstadt, Inv. AE 1534

Fig. 61 Pellegrino Tibaldi, ceiling of the Sala di Ulisse, 1554-1555, fresco, Palazzo Poggi, Bologna

Fig. 62 Pellegrino Tibaldi, corner detail of the ceiling of the Sala di Ulisse, 1554-1555, fresco, Palazzo Poggi, Bologna

Fig. 63 Raphael, detail of the School of Athens, 1508-1511, fresco, Stanza della Segnatura, Palazzo Vaticano

Fig. 64 Ottaviano Mascherino, preliminary drawing for the quadratura in the Sala Bologna, c. 1575, Biblioteca Comunale di Palermo
Fig. 65  Ottaviano Mascherino, drawing of the loggia in the Sala Bologna, Albertina Gallery, Vienna, mappe IX, Inv. 1399, Abb. 7

Fig. 66  Albrecht Dürer, *Imagines Coeli Septentrionales cum duodecim imaginibus zodiaci*, 1515, woodcut

Fig. 67  Albrecht Dürer, *Imagines Coeli Meridionales*, 1515, woodcut

Fig. 68  Johannes Honter, detail of the constellation Auriga from *Imagines Constellationum Borealiwm*, 1532, woodcut

Fig. 69  Gerard Mercator, Celestial Globe, 1551, Greenwich, National Maritime Museum

Fig. 70  François Demongenet, Celestial Globe Gores, c. 1560, woodcut, Württembergische Landesbibliothek, Stuttgart

Fig. 71  Johannes Schönér, Celestial Globe Gores, c. 1515, woodcut

Fig. 72  Johannes Honter, *Imagines Constellationum Borealiwm*, 1532, woodcut

Fig. 73  Pellegrino Tibaldi, *Fall of Phaethon*, drawing, Museum of Fine Arts, Boston

Fig. 74  Pellegrino Tibaldi, ceiling of the Sala di Fetonte, fresco, 1554-1555, Palazzo Poggi, Bologna

Fig. 75  Engraving after Pellegrino Tibaldi’s *Fall of Phaethon* from the ceiling of the Sala di Fetonte, Palazzo Poggi, Bologna

Fig. 76  Michelangelo, *Fall of Phaethon*, 1533, drawing, Windsor Castle, Royal Library, Windsor, inv. 12766

Fig. 77  Sodoma, *Fall of Phaethon*, 1505-1507, oil on canvas, Worcester Art Museum, Worcester

Fig. 78  Sebastiano del Piombo, figure of Phaethon from the Sala di Galatea, 1511, fresco, Villa Farnesina, Rome

Fig. 79  Detail of the Altemps Globe, c. 1567, Vatican Museums

Fig. 80  Giovanni Antonio Vanosino da Varese and Egnazio Danti, Map of the Western Hemisphere, 1580, fresco, Terza Loggia, Palazzo Vaticano

Fig. 81  Egnazio Danti and Antonio Danti, Map of Sardinia, 1580-1581, fresco, Galleria delle Carte Geografiche, Palazzo Vaticano

Fig. 82  Bartolomeo Passerotti, Study for a Dragon’s Head, 1572, drawing, Gabinetto Disegni e Stampe di Palazzo Rosso, Genoa, inv. 2555
Fig. 83  Pavement of the Cappella Gregoriana, St. Peters, Rome

Fig. 84  Boncompagni Coat of Arms, Galleria delle Carte Geografiche, Palazzo Vaticano

Fig. 85  Detail of the constellation Draco, ceiling of the Sala Bologna

Fig. 86  Detail of the constellation Draco, ceiling of the Sala del Mappamondo, Caprarola

Fig. 87  Albrecht Dürer, detail of the constellation Draco, *Imagines Coeli Septentrionales cum duodecim imaginibus zodiaci*, 1515, woodcut

Fig. 88  Cartographic projection methods

Fig. 89  Ptolemy, detail of the stars in the constellation Virgo, *Almagest*, 1528 edition

Fig. 90  Albrecht Dürer, detail of the constellation Orion, *Imagines Coeli Septentrionales cum duodecim imaginibus zodiaci*, 1515, woodcut

Fig. 91  Alessandro Piccolomini, description of differing stellar magnitudes from *de le stelle fisse* (83r), 1540

Fig. 92  Alessandro Piccolomini, Orion, *de le stelle fisse* (100r), 1540

Fig. 93  Tomb of the Monkey, Etruscan, early fifth century BC

Fig. 94  Francisco de Hollanda, reconstruction of the ceiling in the Sala della volta dorata of Nero’s Domus Aurea, 1538

Fig. 95  Alain Manesson Mallet, *Eclipse and Phases of the Moon*, 1683, tinted prints

Fig. 96  Andrea del Castagno, *Uomini Famosi*, 1448, frescoes from the Villa Carducci, Legnaia, now in the Uffizi, Florence

Fig. 97  Raphael, *School of Athens*, 1508-1511, fresco, Stanza della Segnatura, Palazzo Vaticano

Fig. 98  Tintoretto, *Aristotle*, 1560s, oil on canvas, Biblioteca Marciana, Venice

Fig. 99  Lorenzo Sabatini, Seth, Sala Bologna

Fig. 100  Agnolo Gaddi, *Seth at the Entrance to Paradise/The Death of Adam*, c. 1380, fresco, Cappella Maggiore, Santa Croce, Florence

Fig. 101  Cenni di Francesco di Ser Cenni, *The Death of Adam*, 1410, fresco, Cappella della Croce, San Francesco, Volterra

Fig. 102  Giovanni Baglione, *The Sons of Seth*, 1588-1589, fresco, Salone Sistino, Palazzo Vaticano
Fig. 103  Pinturicchio, ceiling of the Sala dei Santi, 1492-1494, fresco, Borgia Apartments, Palazzo Vaticano

Fig. 104  Lorenzo Sabatini, Theut, Sala Bologna

Fig. 105  Figure of Thoth from the Temple of Medinut Habu, c. 1186-1155 BC, Luxor, Egypt

Fig. 106  Lorenzo Sabatini, Atlas, Sala Bologna

Fig. 107  Baldassare Peruzzi, *The Triumph of Fortune*, 1526, woodcut

Fig. 108  Papal medal honoring Julius III, c. 1550-1555

Fig. 109  Giulio Bonasone, *Emblems of Achilles Boeotius*, mid sixteenth century, engraving

Fig. 110  Jacopo Zucchi, *Assembly of the Gods*, 1575, oil on copper

Fig. 111  Battista Zelotti, *Atlas, Geometry, Astrology and the River Nile*, c. 1556, ceiling of the Biblioteca Marciana, Venice

Fig. 112  Farnese Atlas, second-century Roman copy of a Hellenistic Greek statue, Museo Archeologico Nazionale, Naples

Fig. 113  Lorenzo Sabatini, Isis, Sala Bologna

Fig. 114  Situla, Egyptian, fourth century BC, bronze

Fig. 115  Statue of Isis with a situla, c. 120-150, marble, British Museum, London

Fig. 116  Lorenzo Sabatini, Thales, Sala Bologna

Fig. 117  Francesco Marcolino da Forti, *Thales*, from *Le Sorti*, 1540, woodcut

Fig. 118  Rubens, Portrait of Thales, seventeenth century, drawing, British Museum, London

Fig. 119  Photograph of a solar eclipse during totality

Fig. 120  Giorgione, detail of an armillary sphere and solar eclipse, fresco, c. 1504-1505, Castelfranco Veneto

Fig. 121  Raphael, *Isaac, Rebecca, and Abimelech*, 1518-1519, fresco, Loggia, Palazzo Vaticano

Fig. 122  Lorenzo Sabatini, Anaximenes, Sala Bologna

Fig. 123  Detail of Anaximenes, Sala Bologna
Fig. 124  Aquarius, from a ninth-century French manuscript of Aratus’ *Phaenomena*, Biblioteek der Rijksuniversiteit, Leiden. MS. Voss. lat. quarto. 79, fol. 48v

Fig. 125  Giovanni Marco Cinicio, Gemini, from a ninth-century Italian manuscript of Aratus’ *Phaenomena*, The Morgan Library and Museum, New York. M. 389 Latin MS, Phaenomena, f. 23v

Fig. 126  Lorenzo Sabatini, Aratus, Sala Bologna

Fig. 127  *Celestial Globe with Two Figures*, late sixteenth century, drawing

Fig. 128  Detail of Aratus, Sala Bologna

Fig. 129  Map of Greece from c. 1470 manuscript of Ptolemy’s *Geography*, BAV, MS. Vat. lat. 3811

Fig. 130  Celestial map from 1541 printed edition of Ptolemy’s *Planisphaerium*

Fig. 131  Joos van Gent, *Ptolemy*, from the portrait series for Duke Federico da Montefeltro’s *studiolo* in the Palazzo Ducale, Urbino, c. 1475, now in the Louvre

Fig. 132  Palma Giovane, *Ptolemy*, 1575-1595, fresco, Sala del Senato, Doge’s Palace, Venice

Fig. 133  Girolamo Mocetto, figure of Ptolemy from a series of twenty-five grisailles, late fifteenth/early sixteenth century, Musee Jacquemart-Andre, Paris

Fig. 134  Veronese, *Allegory of Navigation with an Astrolabe: Ptolemy*, 1557, oil on canvas, Los Angeles County Museum of Art

Fig. 135  Raphael, detail of *The School of Athens*, 1508-1511, fresco, Stanza della Segnatura, Palazzo Vaticano

Fig. 136  Lorenzo Sabatini, Ptolemy, Sala Bologna

Fig. 137  Lorenzo Sabatini, Marcus Manilius, Sala Bologna

Fig. 138  Beccafumi, *Fall of Marcus Manilius*, fresco, 1530s, Sala del Concistoro, Palazzo Pubblico, Siena

Fig. 139  Detail of Marcus Manilius, Sala Bologna

Fig. 140  Flipped horoscope chart held by Manilius

Fig. 141  Natal chart of Ugo Boncompagni

Fig. 142  Medieval astrologer, fresco, fifteenth century, south wall of the Gran Salone, Palazzo Ragione, Padua
Fig. 143  Lorenzo Sabatini, Alfonso Rex, Sala Bologna

Fig. 144  Detail of Alfonso Rex, Sala Bologna

Fig. 145  Engraving of Pellegrino Tibaldi’s ceiling of the Sala d’Ulisse, Palazzo Poggi, Bologna, 1756

Fig. 146  Engraving of Pellegrino Tibaldi’s 1554-1555 quadratura on the ceiling in the Sala di Fetonte, Palazzo Poggi, Bologna

Fig. 147  Engraving of Tommaso Laureti’s c. 1562 quadratura on the ceiling in the Sala Senatoria, Palazzo Vizzani, Bologna, from Danti’s commentary on Vignola’s Le due regole della prospettiva pratica

Fig. 148  Print of Tommaso Laureti’s c. 1562 fresco decoration of the Sala Senatoria, Palazzo Vizzani, Bologna

Fig. 149  Detail of the quadratura in the Sala Bologna

Fig. 150  Detail of the quadratura in the Sala Bologna

Fig. 151  Detail of the west wall of the Sala Bologna with the countryside of Bologna

Fig. 152  Ambrogio Lorenzetti, Allegory of Good and Bad Government, 1338-1340, fresco, Palazzo Pubblico, Siena

Fig. 153  Detail of the south wall of the Sala Bologna with the city of Bologna

Fig. 154  Detail of the south wall of the Sala Bologna with the city of Bologna

Fig. 155  Detail of the north wall of the Sala Bologna with a perspectival view of Bologna

Fig. 156  Detail of the north wall of the Sala Bologna with a perspectival view of Bologna

Fig. 157  Papal medal honoring Gregory XIII with the allegory of Annona

Fig. 158  Alphonsus Ciacconus, Gregory XIII’s Portrait with Building Works from Vitae et res gestae Pontificum Romanorum, 1677

Fig. 159  Papal medal honoring Gregory XIII with the allegory of Bononia

Fig. 160  Papal medal honoring Gregory XIII with the allegory of Securitas

Fig. 161  Papal medal honoring Gregory XIII with the allegory of Justizia

Fig. 162  Paxis, west wall of the Sala Bologna

Fig. 163  Annona, west wall of the Sala Bologna

xvii
Fig. 164 *Bononia*, north wall of the Sala Bologna

Fig. 165 Papal medal honoring Julius III

Fig. 166 Giulio Bonasone, * Allegory of Bononia*, 1555, engraving, British Museum, London

Fig. 167 *Securitas*, east wall of the Sala Bologna

Fig. 168 *Iustitia*, east wall of the Sala Bologna

Fig. 169 Lower emblematic frieze, west wall of the Sala Bologna

Fig. 170 Upper emblematic frieze, south wall of the Sala Bologna

Fig. 171 Lower emblematic frieze, south wall of the Sala Bologna

Fig. 172 Lower emblematic frieze, north wall of the Sala Bologna

Fig. 173 Galleria delle Carte Geografiche, 1580-1581, Cortile del Belvedere, Palazzo Vaticano

Fig. 174 Ulisse Aldrovandi, *The Boncompagni Dragon*, 1572, Biblioteca Universitaria, Bologna, Aldrovandi, 4, Tavole di animali, 130

Fig. 175 Papal medal honoring Gregory XIII

Fig. 176 Hercules, thirteenth century, MS 1036, Bibliothèque de l’Arsenal, Paris

Fig. 177 Hercules, twelfth century, MS 614, Bodleian Library, Oxford

Fig. 178 Giusto de’ Menabuoi, *The Creation of the World*, 1370-1378, fresco, Baptistry, Padua

Fig. 179 Giovanni di Paolo, *Expulsion from Eden*, 1445, tempera and gold on panel, Metropolitan Museum of Art, New York

Fig. 180 Reconstruction of the original ceiling in the Sistine Chapel

Fig. 181 Piermatteo d’Amelia, ink wash of the original ceiling in the Sistine Chapel, 1480s

Fig. 182 Raphael, *Council of the Gods*, 1517-1518, fresco, ceiling of the Loggia of Psyche, Villa Farnesina, Rome

Fig. 183 Giovanni Lanfranco, *Council of the Gods*, 1620s, fresco, ceiling of the Sala della Loggia, Villa Borghese, Rome

Fig. 184 Francesco del Cossa, Cosmè Tura, and Ercole de’ Roberti, Sala dei Mesi, c. 1470, fresco, Palazzo Schifanoia, Ferrara
Fig. 185  Limbourg Brothers, *August*, from the *Très Riches Heures du Duc de Berry*, 1412-1416

Fig. 186  Detail of April from the Sala dei Mesi

Fig. 187  Detail of April from the Sala dei Mesi

Fig. 188  Giovan Maria Falconetto, Sala dello Zodiac, 1520, fresco, Palazzo d’Arco, Mantua

Fig. 189  Detail of June from the Palazzo d’Arco

Fig. 190  Giotto, Gran Salone, c. 1314, fresco, repainted after the fire of 1420 by Nicolò Miretto and Stefano da Ferrara in 1425-1440, Palazzo Ragione, Padua

Fig. 191  Detail of the Palazzo Ragione

Fig. 192  Camera di Griselda, 1458-1464, fresco, Castello di Roccabianca, Parma

Fig. 193  Ceiling of the Camera di Griselda

Fig. 194  Perugino, Collegio di Cambio, 1498-1500, fresco, Palazzo dei Priori, Perugia

Fig. 195  Ceiling of the Collegio di Cambio

Fig. 196  Detail of Apollo from the Collegio di Cambio

Fig. 197  Raphael, design for the cupola mosaics in the Chigi Chapel, 1513, Santa Maria del Popolo, Rome

Fig. 198  Detail of Mars from the Chigi Chapel

Fig. 199  Giulio Romano, Sala dei Venti, 1527-1528, fresco, Palazzo del Te, Mantua

Fig. 200  Ceiling of the Sala dei Venti

Fig. 201  Marcello Fogolino, ceiling of the Stanza dello Zodiac, after 1533, fresco, Palazzo Sardagna, Trent

Fig. 202  Domenico Brusasorci, ceiling of the audience hall in the Palazzo Chiericati, 1557-1558, fresco, Vicenza

Fig. 203  Prospero Fontana, *The Fall of Phaethon*, 1560, ceiling fresco, Sala degli Dei, Palazzo Vitelli a Sant’Egidio, Città di Castello

Fig. 204  Paolo Veronese, ceiling of the Sala dell’Olimpo, 1559-1561, fresco, Villa Barbaro, Maser

Fig. 205  Jacopo Zucchi, Galleria Rucellai, 1586-1590, fresco, Palazzo Ruspoli, Rome
Fig. 206 Caravaggio, *Jupiter, Neptune, and Pluto*, c. 1599, oil on plaster, Villa Boncompagni-Ludovisi, Rome.

Fig. 207 Detail of *Jupiter, Neptune, and Pluto*, pre restoration.

Fig. 208 Francesco Albani, ceiling of the Loggia in the Palazzo Verospi, c. 1611-1612, fresco, Rome.

Fig. 209 Giulio Quaglio, Salone Centrale, 1697, fresco, Palazzo Antonini, Udine.

Fig. 210 Detail of the Palazzo Antonini.

Fig. 211 Mantegna, ceiling of the Camera degli Sposi, 1465-1474, fresco, Palazzo Ducale, Mantua.

Fig. 212 Alessandro Pampurino, ceiling of the Casa Maffi, c. 1500, fresco, Cremona.

Fig. 213 Correggio, ceiling of the Camera di San Paolo, 1519, fresco, Parma.

Fig. 214 Jacobus Rueff, *Astrologer at a Birth*, from *De conceptu et generatione*, 1587, woodcut.

Fig. 215 Baldassare Peruzzi, ceiling of the Sala di Galatea, 1510, fresco, Villa Farnesina, Rome.

Fig. 216 Raphael, *Astronomia*, 1508-1511, fresco, ceiling of the Stanza della Segnatura, Palazzo Vaticano.

Fig. 217 Lorenzo Leonbruno, ceiling of the Camera dello Zodiaco, 1519-1523, fresco, Castello di San Giorgio, Palazzo Ducale, Mantua.

Fig. 218 Perino del Vaga and Giovanni da Udine, ceiling of the Sala dei Pontefici, 1520-1521, fresco, Borgia Apartments, Palazzo Vaticano.

Fig. 219 Ceiling of the Sala dei Pontefici.

Fig. 220 Ceiling of the Sala dello Zodiaco, c. 1520, fresco, Palazzo Cesarini, Rome.

Fig. 221 Dosso Dossi, ceiling of a room on the *piano nobile* of the Casa Cestarelli, c. 1530, fresco, Ferrara.

Fig. 222 Vasari, Sala degli Elementi, 1555-1557, Palazzo Vecchio, Florence.

Fig. 223 Vasari, *Castration of Saturn*, 1555-1557, oil on canvas, ceiling of the Sala degli Elementi, Palazzo Vecchio, Florence.

Fig. 224 Vasari, *Apotheosis of Cosimo*, 1563-1565, oil on canvas, ceiling of the Sala Grande, Palazzo Vecchio, Florence.
Fig. 225  Lorenzo Costa, ceiling of the Stanza dello Zodiaco, 1579, fresco, Palazzo Ducale, Mantua

Fig. 226  Detail of the ceiling in the Stanza dello Zodiaco

Fig. 227  Francesco Albani, gallery in the Palazzo Giustiniani, 1609, fresco, Bassano di Sutri

Fig. 228  Detail of the ceiling in the Palazzo Giustiniani

Fig. 229  Andrea Sacchi, *Divine Wisdom*, 1629-1633, fresco, Saletta di Anna Colonna, Palazzo Barberini, Rome

Fig. 230  Pietro da Cortona, ceiling of the Sala di Apollo, 1642, fresco, Palazzo Pitti, Florence

Fig. 231  Domenico Maria Canuti, *Apotheosis of Romulus*, 1676, fresco, Sala di Romolo, Palazzo Altieri, Rome

Fig. 232  Giuliano d’Arrigo called Pesello, cupola of the Old Sacristy, 1422 or 1439, fresco, San Lorenzo, Florence

Fig. 233  Detail of the cupola in the Old Sacristy

Fig. 234  Fresco of the cupola in the Pazzi Chapel, after 1459, Santa Croce, Florence

Fig. 235  Fresco of the half dome of the Cappella della Madonna del Rosario, 1448 or 1478, Duomo of Montagnana, outside Padua

Fig. 236  Tycho Brahe, illustration of the 1572 supernova from *De Nova et Nullius Aevi Memoria Prins Visa Stella*, 1573
### Timeline of Events Relevant to the Decoration of the Sala Bologna

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1303</td>
<td>Giotto’s decoration (1303-1306) of the Arena Chapel, Padua, for Enrico Scrovegni</td>
</tr>
<tr>
<td>1314</td>
<td>Giotto’s decoration of the Gran Salone in the Palazzo della Ragione, Padua, for the Comune di Padova</td>
</tr>
<tr>
<td>1425</td>
<td>Nicolò Miretto and Stefano da Ferrara’s restoration (1425-1440) of Giotto’s frescoes in the Gran Salone in the Palazzo della Ragione, Padua</td>
</tr>
<tr>
<td>1439</td>
<td>Giuliano d’Arrigo’s decoration of the cupola of the altar in the Old Sacristy, San Lorenzo, Florence, for Cosimo de’ Medici, il Vecchio (debated date; alternatively suggested as 1442)</td>
</tr>
<tr>
<td>1458</td>
<td>Decoration of the Camera di Griselda (1458-1464) in the Castello Roccabianca, Parma, for Pier Maria Rossi, Count of Berceto</td>
</tr>
<tr>
<td>1460s</td>
<td>Decoration of the cupola (after 1459) of the altar in the Pazzi Chapel, Santa Croce, Florence, for the Pazzi family</td>
</tr>
<tr>
<td>1462</td>
<td>Publication of Georg Peurbach and Johannes Regiomontanus’ <em>Epitome</em> of Ptolemy’s <em>Almagest</em></td>
</tr>
<tr>
<td>1470</td>
<td>Francesco del Cossa, Cosmè Tura, and Ercole de’ Roberti’s decoration of the Sala dei Mesi in the Palazzo Schifanoia, Ferrara, for Duke Borso d’Este</td>
</tr>
<tr>
<td>1478</td>
<td>Decoration of the cupola (after 1478) in the Cappella della Madonna del Rosario in the Duomo of Montagnana</td>
</tr>
<tr>
<td>1480s</td>
<td>Piermatteo d’Amelia’s watercolor reproduction of the original Sistine Chapel ceiling</td>
</tr>
<tr>
<td>1482</td>
<td>Publication of George of Trebizond’s Latin translation of and commentary on Ptolemy’s <em>Almagest</em></td>
</tr>
<tr>
<td>1494</td>
<td>Publication of Giovanni Pico della Mirandola’s <em>Disputationes adversus astrologiam divinicatrium</em></td>
</tr>
<tr>
<td>1498</td>
<td>Decoration of the Sala delle Udienze (Collegio di Cambio) (1498-1500) in the Palazzo dei Priori, Perugia, for the Arte del Cambio</td>
</tr>
<tr>
<td>1502</td>
<td>Birth of Ugo Boncompagni (January 7)</td>
</tr>
<tr>
<td>1508</td>
<td>Raphael's decoration of the <em>Allegory of Astronomia</em> (1508-1511) on the ceiling of the Stanza della Segnatura in the Palazzo Vaticano, for Pope Julius II</td>
</tr>
</tbody>
</table>
1511 Baldassare Peruzzi’s decoration of the ceiling in the Sala di Galatea in the Villa Farnesina, Rome, for Agostino Chigi

1513 Raphael’s designs for the cupola mosaics in the Chigi Chapel in Santa Maria del Popolo, Rome, for Agostino Chigi

1515 Printing of Albrecht Dürer’s star map *Imagines Coeli septentrionales cum duodecim imaginibus zodiaci* and *Imagines Coeli meridionales*

1517 Posting of Martin Luther’s *Ninety-Five Theses*

1519 Lorenzo Leonbruno’s decoration of the ceiling (1519-1523) in the Camera dello Zodiaco in the Castello di San Giorgio, Palazzo Ducale, Mantua, for Duke Federico II Gonzaga

1520 Giovan Maria Falconetto’s decoration of the ceiling in the Sala dello Zodiaco in the Palazzo d’Arco, Mantua, for Gian Luigi Gonzaga

Perino del Vaga and Giovanni da Udine’s decoration of the ceiling (1520-1521) in the Sala dei Pontefici in the Vatican Palace, for Pope Leo X

1521 Decoration of the ceiling (after 1521) in the Sala dello Zodiaco in the Palazzo Cesarini, Rome, for Cardinal Alessandro Cesarini

1527 The Sack of Rome

Giulio Romano’s decoration of the ceiling (1527-1528) in the Sala dei Venti in the Palazzo del Te, Mantua, for Duke Federico II Gonzaga

1530 Ugo Boncompagni graduates from the University of Bologna with a degree in Civil and Ecclesiastical Law

Ugo Boncompagni begins teaching law at the University of Bologna until 1539

Dosso Dossi’s decoration of the ceiling in the Gran Salone in the Casa Cestarelli, Ferrara, for Alberto del Sebastiano Cestarelli

1533 Marcello Fogolino’s decoration of the ceiling (after 1533) in the Stanza dello Zodiaco in the Palazzo Sardagna, Trent

1540 Publication of Alessandro Piccolomini’s star atlas *De le Stelle Fisse*

1543 Publication of Copernicus’ *De Revolutionibus Orbium Coelestium*

1545 Opening of the Council of Trent

1548 Birth of Giacomo Boncompagni, natural son of Ugo Boncompagni (May 8)
1552  Printing of François Demongenet’s first celestial globe gores

1555  Giorgio Vasari’s decoration of the Sala degli Elementi (1555-1557) in the Palazzo Vecchio, Florence, for Duke Cosimo I de’ Medici

1557  Domenico Brusasorci’s decoration of the ceiling (1557-1558) in the Gran Salone in the Palazzo Chiericati, Vicenza, for Valerio Chiericati

1559  Paolo Veronese’s decoration of the Sala dell’Olimpo (1559-1561) in the Villa Barbaro, Maser, for Daniele Barbaro

Pope Pius IV sends Ugo Boncompagni to the Council of Trent as his deputy

1561  Ulisse Aldrovandi appointed Department Chair of Natural History at the University of Bologna

1563  Closing of the Council of Trent

Giorgio Vasari’s decoration (1563-1565) of the Apotheosis of Cosimo I on the ceiling of the Sala Grande in the Palazzo Vecchio, Florence, for Duke Cosimo I de’ Medici

1564  Birth of Galileo Galilei (February 15)

Ugo Boncompagni becomes Cardinal of San Sisto

1572  Appearance of a supernova in Cassiopeia, called the nova stella

Election of Ugo Boncompagni to the papacy as Gregory XIII (May 13)

Coronation of Gregory XIII (May 25)

Cardinal Gabriele Paleotti commissions Cherubino Ghirardacci to make three maps of Bologna

1573  Gregory XIII resumes the abandoned construction of the northern wing of the Cortile di San Damaso in the Palazzo Vaticano

Publication of Tycho Brahe’s De nova stella, concerning the supernova of 1572

Completion of the decoration of the Sala Regia in the Palazzo Vaticano under Gregory XIII

1574  Gregory XIII announces the Jubilee of 1575 (May 10)

Giovanni de’ Vecchi’s decoration of the ceiling in the Sala del Mappamondo in the Palazzo Farnese, Caprarola, for Cardinal Alessandro Farnese

Gregory XIII opens the Porta Sancta, beginning the Jubilee of 1575 (December 24)
1575  Cardinal Filippo Guastavillani writes to the Bolognese ambassador requesting a map of the Bolognese territory for the decoration of the Sala Bologna (February 12)

Decoration of the Sala Bologna in the Palazzo Vaticano for Pope Gregory XIII

Completion of the decoration of the Prima Loggia of the northern Cortile di San Damaso in the Palazzo Vaticano for Gregory XIII

1576  Michele Mercati dedicates his *Istruzione sopra la peste* to Gregory XIII

Egnazio Danti begins teaching mathematics at the University of Bologna

Publication of Andrea Bacci’s *Del Tevere*, which praises Gregory XIII’s contributions to the restoration of the *Acqua Vergine*

Completion of the decoration on the Seconda Loggia of the northern Cortile di San Damaso in the Palazzo Vaticano for Gregory XIII

1577  Ottaviano Mascherino’s construction (1577-1585) of the Palazzo del Quirinale for Gregory XIII

1578  Cardinal Gabriele Paleotti begins writing his treatise *Discorso intorno alle imagini sacre e profane*

Gregory XIII visits the Palazzo Farnese at Caprarola

1579  Lorenzo Costa’s decoration of the ceiling in the Stanza dello Zodiaco in the Palazzo Ducale, Mantua, for Duke Guglielmo Gonzaga

1580  Egnazio Danti’s decoration (1580-1581) of the Galleria delle Carte Geografiche in the Cortile del Belvedere of the Palazzo Vaticano for Gregory XIII

Completion of the decoration on the Terza Loggia of the northern Cortile di San Damaso of the Palazzo Vaticano for Gregory XIII

1581  Ottaviano Mascherino’s construction of the Torre dei Venti in the Cortile del Belvedere of the Palazzo Vaticano for Gregory XIII

Agostino Carracci dedicates his map of Bologna to Cardinal Gabriele Paleotti

1582  Introduction of the reformed calendar with the Papal Bull *Inter gravissimas* (February 24)

Gregory XIII promulgates a revised edition of Gratian’s decretals

Publication of Cardinal Gabriele Paleotti’s *Discorso intorno alle imagini sacre e profane*
Tommaso Laureti’s decoration of the ceiling in the Sala di Costantino in the Palazzo Vaticano for Gregory XIII

1583 Publication of Giacomo Vignola’s *Le due regole della prospettiva pratica* with commentary by Egnazio Danti

1585 Death of Gregory XIII (April 10)

1586 Sixtus V’s Bull *Coeli et terrae* bans the practice of judicial astrology (January 5)

Jacopo Zucchi’s decoration (1586-1590) of the Galleria Rucellai in the Palazzo Rospoli, Rome, for Orazio Rospoli

1591 Publication of Marc’Antonio Ciappi’s *Compendio delle heroiche et gloriose attioni et santa vita di Papa Greg. XIII*

1599 Caravaggio’s decoration (c. 1599-1600) of Jupiter, Neptune, and Pluto in the Villa Boncompagni-Ludovisi, Rome, for Cardinal Francesco Maria del Monte

1600 Giordano Bruno burned at the stake in Rome for heresy

1609 Galileo makes a series of observations of the surface of the moon (November 30 – December 18)

Francesco Albani’s decoration of the ceiling in the Gallery of the Palazzo Giustinian, Bassano di Sutri, for Marchese Vincenzo Giustinian

1610 Galileo observes four bright stars near Jupiter and concludes they are satellites orbiting the planet (January 7)

Publication of Galileo’s *Sidereus Nuncius* (March)

Galileo observes the rings of Saturn (July)

Galileo observes the phases of Venus (December)

1611 Francesco Albani’s decoration (c. 1611-1612) of *Apollo with the Zodiac* on the ceiling of the loggia in the Palazzo Verospi, Rome, for Cardinal Ferrante Verospi

1616 The Holy Office under Paul V issues its condemnation of Copernicanism (February 25)

Copernicus’ *De revolutionibus* is placed on the Index of Banned Books

1623 Publication of Galileo’s *Il Saggiatore*

1627 Publication of Johannes Kepler’s *Rudolphine Tables*, which replace those of King Alfonso X
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1629</td>
<td>Galileo finishes <em>Dialogo sopra i due massimi sistemi del mondo</em>; there is a delay in printing as a result of censors. Andrea Sacchi’s decoration (1629-1633) of <em>Divine Wisdom</em> on the ceiling of the Salotto di Anna Colonna in the Palazzo Barberini, Rome, for Cardinal Antonio Barberini.</td>
</tr>
<tr>
<td>1631</td>
<td>Urban VIII issues the Bull <em>Inscrutabilis</em>, which confirms Sixtus V’s ban of judicial astrology (April 1).</td>
</tr>
<tr>
<td>1632</td>
<td>Publication of Galileo’s <em>Dialogo sopra i due massimi sistemi del mondo</em>. Urban VIII bans further distribution of the <em>Dialogo</em> (August).</td>
</tr>
<tr>
<td>1633</td>
<td>Trial of Galileo.</td>
</tr>
<tr>
<td>1676</td>
<td>Domenico Maria Canuti’s decoration of <em>The Apotheosis of Romulus</em> on the ceiling of the Sala di Romolo in the Palazzo Altieri, Rome, for Cardinal Paluzzo Altieri.</td>
</tr>
<tr>
<td>1697</td>
<td>Giulio Quaglio’s decoration on the ceiling of the Salone Centrale in the Palazzo Antonini, Udine, for Count Antonio Antonini.</td>
</tr>
<tr>
<td>1742</td>
<td>Publication of Giovanni Pietro Maffei’s <em>Degli annali di Gregorio XIII. Pontefice Massimo</em>.</td>
</tr>
<tr>
<td>1822</td>
<td>Pius VII transforms the Sala Bologna into a picture gallery.</td>
</tr>
<tr>
<td>1855</td>
<td>Leo XIII removes then subsequently rehangs the tapestries in the Sala Bologna.</td>
</tr>
<tr>
<td>1909</td>
<td>Permanent removal of the tapestries in the Sala Bologna.</td>
</tr>
<tr>
<td>1934</td>
<td>Restoration of the ceiling in the Sala Bologna (1934-1939).</td>
</tr>
</tbody>
</table>
Introduction

The Palazzo Vaticano in Rome is arguably the most important of all European palatial residences and nearly every room decorated in it is a testament to a particular era and set of propagandistic assertions. The Sala Bologna, located in the wing that overlooks Piazza San Pietro, is no exception, and it is among the most important ensembles commissioned by Pope Gregory XIII (1572 – 1585), whose name is synonymous with the reformed calendar. The room is a monumental expression of Italian Renaissance artistic and scientific achievement, with a vision of the heavens frescoed on the ceiling and detailed maps of the pope’s hometown of Bologna painted on the walls. Its imagery concretizes the goals and aspirations of Gregory’s entire pontificate, that is, the use of empirical investigation as a tool of the Counter Reformation.

The celestial subject of the vault belongs to the grand tradition of ceiling decoration that can be firmly traced as far back as Emperor Nero’s Domus Aurea in ancient Rome. While the usual Renaissance depiction of the heavens was designed to highlight a patron’s universal knowledge or their personal horoscope, the iconography in the Sala Bologna is unique in presenting a view of the entire celestial realm. Chronologically on the cusp of the scientific revolution of the seventeenth century and representing a critical juncture in the Roman Catholic attitude toward natural philosophy, this imagery demonstrates a shift in interest and emphasis from astrological interpretation, as condemned at the Council of Trent, to astronomical calculation, as promoted by the Church.

Plotted by Giovanni Antonio Vanosino da Varese (fl. 1562-85), a little-known artist from Lombardy, the entire cosmic sphere is depicted on the ceiling, with the northern celestial hemisphere painted in the center and the southern hemisphere on either side [fig. 1]. The stellar map is remarkable for its cartographic accuracy: each of the forty-nine
constellations—painted in their traditional allegorical forms by Lorenzo Sabatini (1530 – 1576) and his workshop—is exquisitely rendered in accurate relation to one another, and the relative positions of the individual stars are correctly plotted. Additionally, the painted stars are depicted in varying sizes to reflect the differing magnitudes, or degrees of brightness, of the actual stars they represent. The principle meridian lines, including the celestial equator, the ecliptic, the North and South Poles, the Arctic and Antarctic Circles, and the Tropics of Cancer and Capricorn, are inscribed in brilliant gold. Because the Sun, Moon, and other planets are absent, the Sala Bologna ceiling does not represent a particular horoscope.

Below the celestial map is an impressive fictive colonnade painted by the architect and perspective specialist Ottaviano Mascherino (1524 – 1606). Within this quadratura sit ten figures painted by Sabatini [fig. 2]. On the north side of the room, the Old Testament figure Seth sits next to the Egyptian god Theut. Above the east wall, the Egyptian goddess Isis is centered between the mythical Titan Atlas and the Greek philosopher Thales. On the south side, Anaximenes, another Greek philosopher, is painted next to the Greek astronomer and poet Aratus. On the east side sits the ancient astronomer and geographer Ptolemy, the Roman poet Marcus Manilius, and Alfonso X, a medieval Castilian king and astrologer.

Sabatini and his workshop also painted the remaining decoration of the room [figs. 3-6]. The city of Bologna is depicted on the southern wall and is flanked on each side by frescoes commemorating important historical events in the city [fig. 7]. To the left is Gregory IX Delivering to the Bolognese Doctors the Codex of the Decretals, with the medieval pope in the guise of Gregory XIII, and on the right is Boniface VIII Delivering to the Bolognese Doctors the Sixth Book of the Decretals. On the western wall, a large painted map of the Bolognese territory is bordered by two allegories: Pacis on the left and Annona, the allegory of the grain harvest, on the right [fig. 8]. Between two large windows on the northern wall is the allegory
Bononia and a small perspectival view of Bologna above her [fig. 9]. Finally, the east wall, which today exists in poor condition, contains depictions of the allegory Securitas and the head of a fifth allegory, most likely Justizia [fig. 10].

Although it has yet to be recognized as such, the appearance of an astronomical ceiling in the papal palace exemplifies a uniquely sensitive moment in the history of science: Copernicanism had yet to be condemned and Galileo’s observations would not be proclaimed heretical for another thirty-five years. Briefly put, the depiction of an accurate map of the heavens in the Sala Bologna demonstrates the absolute control of the Church over the entire celestial realm, just as the maps of Bologna painted on the walls represent a more circumscribed territorial authority. The implicit subject of these frescoes—a sophisticated portrayal of Catholic hegemony—is made possible only through the pairing of astronomy and geography. In this way, as in others, the decoration of the Sala Bologna serves as a monumental statement of the aims of the Counter Reformation in ways that have been heretofore unsuspected.

The ceiling, which until now has remained unstudied in its entirety, provides a unique opportunity to examine celestial and cartographic iconography, a frequently encountered theme in Italian Renaissance and Baroque murals that has yet to be fully recognized and explored. Moreover, this room that bears the name of Gregory’s birthplace offers crucial evidence of the ways in which religion depended on science in the late Cinquecento to explore and exploit a fuller understanding of the divine. The room’s location in the Vatican, at the spiritual center of the Catholic Church and the Italian Renaissance, gives it particular relevance for such a study.

Despite its specialized composition and remarkable accuracy, the ceiling of the Sala Bologna is mentioned only in passing in art historical literature, and even less is said of the
ten astronomers painted within the fictive loggia. Two factors have largely contributed to this dearth of scholarship. One issue is inherent to the room itself: it is located adjacent to the current papal residence and is thus in a part of the Palazzo Vaticano that is not accessible to the general public. Additionally, as Claudia Rousseau notes, an informed approach to celestial iconography requires an advanced understanding of Early Modern astrology and astrological practice.¹ As such there has thus far been no attempt to contextualize Gregory’s ceiling within the greater tradition of Renaissance celestial iconography. Instead, far greater attention has been paid to the territorial maps of the walls.

Review of Literature

References to the Sala Bologna in the literature of Gregory XIII or the Palazzo Vaticano are scant. In his *History of the Popes from the Close of the Middle Ages* Ludwig von Pastor, for example, gives one paragraph to the room, listing the artists involved, including the erroneous attribution of the decretal scenes to Cherubino and Giovanni Alberti.² Perhaps more significantly, the German historian published the *Memorie sulle pitture et fabbriche*, an undated document that describes the room’s decoration as well as the contributions of Vanosino and Sabatini.³ Comparatively, in their respective monographs on the Palazzo Vaticano, Deoclecio Redig de Campos and Carlo Pietrangeli give equal but limited treatment to the room, describing the decorative program, listing the artists involved, and outlining a restoration campaign that occurred between 1934 and 1935.⁴

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³ BAV, Bonc. D5, ff. 240r-241v. For this document, see Appendix 3A.
The ceiling and the walls of the Sala Bologna have often been examined independently, resulting in typologically fragmented research that cannot provide an explanation for an ensemble that must have been conceived as a unified program. In 1967 Jacob Hess correctly noted that the location of the stars and constellations painted on the ceiling follow the descriptions of Ptolemy’s *Almagest.* He also briefly discussed Vanosino’s other commissions, including the 1574 ceiling of the Sala del Mappamondo in the Palazzo Farnese at Caprarola. Additionally, he attributes the so-called Altemps Globe located in the collections of the Vatican Museums to the Lombard painter. Finally, Hess argues that the highly specialized nature of the ceiling fresco suggests the unlikelihood of the little-known Vanosino developing the composition himself.

Deborah Warner, writing in 1971, elaborates on this last of Hess’ hypotheses, and suggests that Vanosino likely used as his guide the contemporary and popular celestial globes of François Demongenet. These articles by Hess and Warner are the most frequently cited sources for the ceiling, and although each contributes to the question of Vanosino’s cartographic source, neither approaches other aspects of the commission. Likewise, Kristen Lippincott, who has written extensively on Italian Renaissance astrological ceilings, gives no more than a mention to the Vatican ceiling, making reference to it only in her discussion of the fresco at Caprarola. Similarly, in his in-depth article about the celestial iconography at Caprarola, Loren Partridge notes only the “strictly Ptolemaic” composition of the Sala Bologna ceiling. Another mention of Gregory’s commission comes from Martin Kemp who comments on Mascherino’s quadratura in his 1990 book *The Science of Art: Optical Themes.*

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in Western Art from Brunelleschi to Seurat. Here he suggests that the scientific properties necessary for the creation of Mascherino’s illusionistic architecture reinforce the astronomical theme of the figures painted in the fictive loggia given that both sciences rely on geometry and optics.

Three works on paper related to the ceiling fresco have been located. David McTavish argues that a drawing in the collection of the Boston Museum of Fine Arts and traditionally attributed to Giulio Romano is actually by Pellegrino Tibaldi. The work portrays The Fall of Phaethon, and, given its similarity to the depiction of the same event in the Sala Bologna, McTavish suggests that it served as a compositional and stylistic inspiration for Vanosino. In 1999 Lucia Marinig discovered two preliminary sketches in the Hessisches Landesmuseum in Darmstadt for the figures of Theut and Atlas who are painted in Mascherino’s loggia. Marinig argues against the original attribution of Federico Zuccari and correctly identifies the drawings as Sabatini’s preparatory work. Simonetta Prosperi Valenti Rodinò notes that a drawing in the Biblioteca Comunale di Palermo by Mascherino, which shows the outline of the Sala Bologna’s quadratura, is a preparatory sketch rather than a study of the finished fresco.

Although recent studies have begun to explore the significance of celestial decoration in Early Modern palaces, this scholarship considers each example in isolation and therefore no overarching themes have thus far come to light. Additionally, this scholarship has not assessed the importance of the Vatican ceiling. Fritz Saxl, one of the leading scholars on astrological iconography, makes no mention of the Sala Bologna in his otherwise

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9 Martin Kemp, The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat (New Haven: Yale University Press, 1990), 76.
comprehensive *La fede negli astri dall'antichità al Rinascimento.* Likewise, Jean Seznec’s authoritative *The Survival of the Pagan Gods: The Mythological Tradition and Its Place in Renaissance Humanism and Art* considers the illustration of the constellations in medieval manuscripts, the depiction of the planetary gods in various frescoes, and other celestial iconography, but the Sala Bologna is once again absent.

A more considerable amount of attention has been paid to the terrestrial maps frescoed on the walls of the Sala Bologna. G. Comelli, writing in 1896, describes the city and territory maps, noting their commission, dimensions, and iconography. Likewise, in two separate publications, Roberto Almagià discusses the Bolognese maps, citing the relevant archival documents and listing the restorations of the 1930s. The most thorough source on the terrestrial maps comes from the more recent contributions of Francesca Fiorani. Expanding upon a 2004 article entitled “La Sala Bologna nell’Appartamento di Gregorio XIII” is her 2005 publication *The Marvel of Maps: Art, Cartography and Politics in Renaissance Italy.* Here Fiorani discusses the patronage of various map cycles in the Renaissance and devotes an entire chapter to the Sala Bologna. In this discussion she connects the cartographic iconography to the opinions and arguments presented by the sixteenth-century Cardinal Gabriele Paleotti in his *Discorso Intorno alle Imagini Sacre e Profane.* Writing about the appropriate Post-Tridentine artistic style, Paleotti allocates a chapter of his text for the

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discussion of different types of profane art that are useful for religious contemplation, including map cycles. Fiorani convincingly argues that the Sala Bologna visualizes these arguments and she therefore links the use of science to the ecclesiastical goals of Gregory XIII’s pontificate. This essential connection provides the basis for many of my own arguments and conclusions and I have expanded on Fiorani’s reasoning throughout this dissertation.

Unlike other prominent rooms in the Palazzo Vaticano there has been no monograph on the Sala Bologna until recently. As a result of the collaboration between several scholars, the book *La Sala Bologna nei Palazzi Vaticani: Architettura, cartografia e potere nell’età di Gregorio XIII* was published in 2011. Every aspect of the room is considered and through extensive archival research and iconographical analyses many heretofore-unknown aspects have been discovered. Fiorani opens the book with a summary of her 2005 work, contextualizing the room within the pontificate of Gregory XIII and the late Cinquecento. Maria Teresa Sambin de Norcen outlines the commission of the Sala Bologna, placing it within the framework of the construction of the Cortile di San Damaso. Sambin de Norcen’s archival research fills the appendices of the book.

In his essay, Francesco Ceccarelli discusses the city map on the south wall. In addition to presenting the archival documents and possible cartographic sources for the map, he describes the various buildings, canals, piazze, and bridges depicted in the painted city. Nadja Aksamija focuses her attention on the map of the Bolognese countryside painted on the west wall. Here she argues that the absence of contemporary border feuds indicates that the fresco represents an idealized view of Gregory’s goals of peace. Additionally, she assesses the number of churches represented in the scene and suggests that such an

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overwhelming attention to ecclesiastical buildings shows a priority of religious prosperity in the region.

Shorter essays include Lucia Nuti’s and Franco Farinelli’s discussions of the various depictions of Bologna in the Palazzo Vaticano and elsewhere. Michele Danieli investigates Lorenzo Sabatini’s career and his many contributions to the decoration of the Palazzo Vaticano during the Boncompagni papacy. The book also contains several schede on each aspect of the room’s iconography. Here all of the technical details are explored, such as the commission documents, the various artists involved, and the identification of esoteric iconography.

The work presented in this dissertation is an expansion of my own contribution to this monograph, an essay entitled “La volta celeste della Sala Bologna e la tradizione della Cosmografia rinascimentale.” This essay led me to new insights, enriching and extending the scope of the dissertation I had previously begun. Moreover, the collaborative work on the book proved helpful both in confirming my previous research and indicating avenues for exploration that no one has previously investigated, and I am indebted to these scholars for sharing their work and archival discoveries with me before publication. Additionally, many of my conclusions would not have been possible without the extensive photographic campaign that accompanied the text.

It is the objective of my dissertation to further develop and add to this recent scholarship by providing an in-depth analysis of the Sala Bologna ceiling and its iconographical relationship to the other imagery painted in the room. I argue that these frescos provide visual evidence that scientific investigation was once used as an integral tool of the Church during the Counter Reformation. In other words, I will reconcile the original unity of a worldview that our modern proclivity for speculation has divided into separate
disciplines. As a cardinal Ugo Boncompagni was intimately involved with the Council of Trent, and the reunification of the Church was an aspiration firmly woven into the nature of his pontificate; knowledge of the Earth and the heavens via scientific inquiry was simply another method used at the time to reach an understanding of the divine. In addition, I explore the fundamental motivation behind the shift in emphasis from astrological to astronomical iconography in his ceiling. Gregory’s use of astronomical calculation to establish a fixed date for Easter in the new Gregorian calendar, a revision that brought primacy to the Catholic Church, is but one example of the Boncompagni pope’s interest in the celestial sciences.

Chapter Outline

Chapter 1 introduces the dissertation with the necessary contextual background of Gregory XIII and his papacy. The Boncompagni pope was particularly involved in leaving his mark on the Palazzo Vaticano, commissioning in addition to the Sala Bologna the famed Galleria delle Carte Geografiche and the Torre di Venti, a solar observatory. There is no comprehensive text on Gregory XIII’s pontificate besides Ludwig von Pastor’s valuable but dated and superficial History of the Popes from the Close of the Middle Ages, and even a cursory examination of this pontificate reveals the diverse interests of the pope. Although it is not the goal of this dissertation to create a broad survey of Gregory’s activities, my investigation of the Sala Bologna will be a crucial component for such a future endeavor. Especially relevant for the commission of the Sala Bologna is the 1575 Jubilee, and thus I examine the holy year and its associated artistic commissions. This is followed by a discussion of the Cortile di San Damaso in the Palazzo Vaticano, the construction of which was resumed

almost immediately upon Gregory’s election. In addition to completing the building project begun by Pius IV, the Boncompagni pope commissioned the decoration of various logge and rooms throughout the northern wing. Each of these is surveyed so as to provide a decorative framework for the Sala Bologna. This chapter ends with a record of the room’s use from the time of its conception to the present day.

In the second chapter I begin with an evaluation of the artists Vanosino, Sabatini, and Mascherino. This is followed by an in-depth analysis of all aspects of the Sala Bologna ceiling’s iconography. Each individual constellation is described and compared stylistically to the representations at Caprarola and in Albrecht Dürer’s cartographic print of 1515. Next, each of the personalities painted in the quadratura are explained, including their mythological or historical significance, as well as the reasoning behind their inclusion. Finally, I explore the quadratura itself, beginning with its stylistic heritage in Bologna and concluding with Mascherino’s own design.

In chapter 3 the entire decorative program of the Sala Bologna is considered. After a brief description of the wall frescoes I present three arguments on the iconographical meaning behind the cartographic and allegoric imagery. Given the subject of the maps decorating the lower walls, it is traditionally accepted that these frescoes celebrate the hometown of Gregory XIII. Based on the appearance of certain iconography, I build upon this notion and argue that the decoration specifically represents the University of Bologna and its tradition of natural philosophy. Additionally, I argue that the room presents Gregory’s ideological control over both the celestial and terrestrial realms. Lastly, I expand on Fiorani’s analysis of Paleotti’s treatise and suggest that the cartographic iconography demonstrates the Boncompagni pope’s use of science to advance his Counter-Reformative goals.
In the last chapter I situate the Sala Bologna ceiling within the tradition of celestial fresco cycles, beginning with a discussion of the history of this imagery in antiquity. This is followed by a survey of Renaissance astrological frescoes in order to examine the socio-political motivations behind such decoration. The function of the Sala Bologna’s ceiling is presented and compared to all other similar murals, and thus the originality of Gregory’s fresco becomes apparent. From such an evaluation I am able to explain why astrological ceilings were popular during this time period and what they were able to accomplish that allegorical subjects could not.

A Note on Terminology

Given the astrological subject of this dissertation there are many terms that may be unfamiliar to the art historian. When possible I try to provide the appropriate definitions in the text or a footnote. I have also included a glossary of the most commonly used astrological terms in Appendix 5. There are a few words, however, that I must define at the outset. To begin, distinguishing between the terms astronomy and astrology during the Renaissance is problematic, as the two were often practiced in tandem. Roughly speaking, however, astronomy was the calculation of the movements of the planets and other celestial bodies, while astrology was the interpretation of the impact of these movements on one’s life. This is how I have chosen to distinguish between the two celestial sciences and as such this is how I use the terms throughout my dissertation. A brief history of both is presented in Chapter 4. In this same vein, it is worth noting that when I use the term planet I refer to the Renaissance definition of such, which included Mercury, Venus, the Earth, the Sun, the Moon, Mars, Jupiter, and Saturn. Although we do not typically consider the Sun and the
Moon as planets in modern parlance, this is how they were defined at the time of the Sala Bologna’s decoration.

In Chapter 4 I analyze the various figures painted within the *quadratura* in the Sala Bologna, and this discussion shows the diversity of personalities. For simplicity’s sake, however, I have chosen to identify this collective group of figures as astronomers. I recognize that this is overly simplistic but, in the interest of being concise, it is a useful definition to employ.

Finally, I should explain my use of the terms science and natural philosophy. In modern usage the term science relates specifically to post-Galilean natural inquiry that follows a specific method that had not yet been developed at the time of the Sala Bologna’s commission. In the interest of simplicity, however, I have chosen to use the term science as a general reference to natural investigation in the Renaissance. Moreover, the discipline of natural philosophy is defined as the study of nature and the universe. In keeping with a period-appropriate worldview, I have elected to use the terms natural philosophy and science interchangeably.
Chapter 1: The Boncompagni Papacy, the Holy Year of 1575, and the Commission of the Sala Bologna

Following an extraordinarily brief conclave of just a single day, Ugo Boncompagni was elected to the papacy as Gregory XIII on May 13, 1572, at roughly 10:00pm. From the onset he devoted his time and energy to Catholic reform, a passion that stemmed largely from his intimate involvement with the Council of Trent (1545 – 1563). At the forefront of his agenda was the effort to reunite the Papal States with the Protestant North, as well as bring together the Catholic West and the Orthodox East, and such goals were firmly woven into the nature of his commissions. For example, Francesca Fiorani notes the presence of reunification iconography in the St. Bartholomew’s Day Massacre frescoes painted by Giorgio Vasari and Lorenzo Sabatini in the Sala Regia in 1573.

More generally, and demonstrating a hallmark of the Counter Reformation, Gregory used sacred art and


architecture as Catholic propaganda in response to Protestant criticism. Perhaps most significant in this vein was his restoration of Rome and her monuments in an effort to reestablish the city’s position as the center of ecclesiastical power both physically and symbolically. The revision of the calendar also brought primacy back to Rome, and therefore the Catholic Church, by establishing a universal method of annual measure. The pinnacle of these reformatory efforts was the Jubilee of 1575, for which myriad artistic and architectural projects were commissioned, including the Sala Bologna.

To provide a contextual basis for the succeeding chapters, I will here detail the commission of the Sala Bologna, beginning with the religious atmosphere of Post-Tridentine Rome and the Jubilee of 1575. Following this will be a discussion of the construction of the Cortile di San Damaso, as well as the decoration of its various logge. After an exploration of the Sala Bologna’s function I will discuss the restoration campaigns on the ceiling fresco. Finally, I will outline the recent digital scanning of the room by Factum Arte, as well as the replication of the southern wall for the Museo della Storia di Bologna.

Part I: The Post-Tridentine Jubilee of 1575

As commemorated in Giovanni Battista dei Cavalieri’s print of 1575 and various papal medals, the Boncompagni Jubilee began on the evening of December 24, 1574, with the ceremonial opening of the porta sancta [figs. 11, 12].


condemnation of Holy Years and pilgrimages as exploitative methods of financial gain, this Jubilee was especially significant as it was the first after the Council of Trent and was therefore an opportunity for the Catholic Church to highlight new reforms. In addition to contradicting this negative Protestant opinion and solving the practical requirements of comfortably accommodating a large influx of pilgrims—an estimated 400,000 eventually entered the city—Gregory’s restorative campaigns offered a symbolic rebirth to the city after the Sack of Rome in 1527. Moreover, as Nicola Courtright argues, the deterioration of the physical fabric of the city was seen in the eyes of the Protestants as parallel to the corruption within the papacy. Given that much of Rome’s livelihood relied upon the patronage of the Church, Gregory’s efforts also provided the city with a much-needed economic stimulus.

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26 For the number of pilgrims see Canova, 93; Pastor vol. 19, 204; and Wisch, 85. For contemporary accounts of Gregory’s restoration see BAV, Bonc. D.5, ff. 240r-242v, as first transcribed by Pastor vol. 20, appendix 11; and Ciappi, 5-41. Specific bibliography for various commissions will follow below.

27 Courtright 2003, 18-19.

The highest priority was given to the construction and reconstruction of roads and bridges, primarily those leading to the Vatican and St. Peter’s. Additionally, as commemorated in Antonio Lafreri’s print of 1575, particular effort was focused on connecting the seven pilgrimage churches in anticipation of the expected foot traffic [fig. 13]. The Acqua Vergine was reopened, and subsequently new fountains were commissioned to both beautify the city and provide fresh drinking water to the populace. Important Early Christian monuments were restored, including Santa Maria Maggiore, the Lateran Baptistry, and the portico of St. Peter’s. Gregory’s bull Quae publice utilia promoted new building and urged families and business owners to neaten their properties. So successful were these improvements to the city that Rome began to thrive once again with artistic patronage and consequently many of these endeavors were commemorated in Marc’Antonio Ciappi’s portrait of Gregory XIII and his deeds [fig. 14].

Given that the Vatican was the ultimate goal of pilgrims to Rome, as well as a place of temporary accommodation for visiting dignitaries and church officials, a significant effort was spent on new building and decoration, as well as completing various unfinished projects. Work continued, albeit slowly, on the construction of new St Peter’s, with Giacomo Vignola (1507 – 1573) and Giacomo della Porta (1533 – 1602) as overseeing

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29 For roads see Canova, 94; Fiorani 2011, 14; Fiorani 2005, 141; Pastor vol. 19, 198, vol. 20, 594-595, 601-602, 627; and Thurston, 86. For bridges see Canova 94, Fiorani 2005, 141; Pastor vol. 19, 198, vol. 20, 551, 596, 627; and Thurston, 86.
30 Canova, 95; Courtright 2003, 10; Francesca Fiorani, “Da Bologna al mondo: Astronomia, cartografia, giurisprudenza e la Chiesa universale di Gregorio XIII,” in La Sala Bologna nei Palazzi Vaticani, 14; Fiorani 2005, 141; Pastor vol. 19, 208.
31 Canova 95; Courtright 2003, 10; Francesca Fiorani, “Da Bologna al mondo: Astronomia, cartografia, giurisprudenza e la Chiesa universale di Gregorio XIII,” in La Sala Bologna nei Palazzi Vaticani, 14; Fiorani 2005, 141; Pastor vol. 19, 208.
33 Canova 94; Courtright 2003, 21; Freiberg 1991, 66-87; and Pastor vol. 19, 611.
34 Canova, 95; Fiorani 2005, 141; and Wisch, 85.
35 The Vatican Palace was virtually transformed during the Boncompagni papacy, including Mascherino’s completion of the western arm of the Cortile del Belvedere (1580) and the building of the Torre dei Venti (1578-1580), but these commissions post-date the Jubilee.
architects. Both men contributed to the building efforts of Michelangelo’s dome but it was not until the later reign of Sixtus V that the project was completed. Della Porta’s significant contribution during the Boncompagni papacy was the construction of the Cappella Gregoriana in the northern transept of the church beginning in 1572. The chapel, completed in 1583, became the home of important relics, including the painted icon of the Madonna del Soccorso and the bones of St. Gregory Nazianzus, the latter of which were transferred from Santa Maria in Campo Marzo in 1580.

In the palace itself, various artists were commissioned to complete the fresco cycle in the Sala Regia in 1572-1573, including Sabatini and Vasari. Celebrating Gregory XIII’s namesake, the final additions to the room’s décor include scenes from the life of Gregory VII and Gregory XI, as well as a depiction of the St. Bartholomew’s Day Massacre of 1572. During the same time, Sabatini was commissioned to complete the decoration of the Cappella Paolina, including the frescoes of The Martyrdom of St. Stephen and The Fall of Simon Magus. Perhaps the biggest undertaking was the renewal of construction and decoration on the Cortile di San Damaso, originally begun during the pontificate of Pius IV de’ Medici (r.

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The new building was used to house important guests during the Holy Year, and although the decoration of many rooms and halls was not completed until the 1580s, the Sala Bologna was finished in time for the celebration.

Part II: The Cortile di San Damaso and the Commission of the Sala Bologna

Situated south of the Cortile del Belvedere and east of the Cortile del Pappagallo [fig. 15], the Cortile di San Damaso was designed to connect with and mimic in both design and decoration Bramante’s existing east-facing logge famously completed and decorated by Raphael between 1516 and 1519 for Leo X (r. 1513-1521). Pius IV’s short reign prevented his seeing the enterprise to its conclusion, but the presence of Medici coats of arms on the terza loggia of the first three bays attest to the construction completed during his brief pontificate. The project was ultimately abandoned by his successor Pius V (r. 1566 – 1572).

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39 For the use of the Cortile during the Jubilee see Fiorani 2005, 143.


Gregory XIII resumed work on the building in the autumn of 1573, beginning with the clearing of rubble resulting from the interruption in construction. The papal nephew Filippo Guastavillani (1541 – 1587) ordered payments and managed the project, while Martino Longhi il Vecchio (1534 – 1591) was appointed papal architect and overseer of the design. Gregory’s architects added six bays to Pius’ existing three on the north side, bringing the Cortile di San Damaso to a total of nine bays on four levels. Following Bramante and Raphael’s example, Longhi constructed the *pianterreno* with an unadorned arcade separated by plain pilasters [fig. 16]. The upper three stories increased in embellishment, with Doric pilasters on the façade of the *primo piano*, Ionic pilasters on that of the *secondo*, and engaged Corinthian columns between the square windows on the *terzo piano*. A short balustrade is inserted in the bays of the upper levels.

Maria Teresa Sambin de Norcen has shown that construction progressed quickly, as demonstrated by payments between 1573 and 1576, indicating the wing’s completion in just four years. Indeed, Étienne Dupérac’s engraving of 1577 shows the finished northern arm as well as the beginning of work on the eastern wing [fig. 17]. Two frescoes painted shortly thereafter, Antonio Tempesta’s *Translation of the Relics of St. Gregory Nazianzus* (1580) [fig. 18]

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42 A payment dated November 9, 1573 (ASR, CI, GT, f. 11b) records the removal of debris and confirms Gregory’s immediate involvement with the project upon his election. See Sambin de Norcen 2011A, 25; 2011E, 180.


44 Sambin de Norcen meticulously itemizes the relevant payment records and lists the workers involved in the construction of the northern wing, as well as a timeline of progress. For example, the salary of the masons is paid regularly between November 1573 and November 1575, and then slows down before stopping completely in July 1576. See Sambin de Norcen 2011E, 180.
and Cesare Nebbia and Giovanni Guerra’s *Piazza of St. Peter’s and the Vatican Palace* (1588) [fig. 19] also record the completed logge.

Built as a new series of apartments for Gregory and his court, the Cortile di San Damaso contains a wealth of elaborately frescoed rooms and richly painted logge.\(^{45}\) Payment records and inscriptions on the vaults of each hall relay the progression of decoration, demonstrating that the Prima Loggia was completed in 1575 for the Jubilee, the Seconda shortly thereafter in 1576, and the Terza in 1580.\(^{46}\) Artistic management of the project was assigned to Sabatini and his large workshop.\(^{47}\) Demonstrating the beginning of his work is an advance payment on March 26, 1575, “for the paintings to be done in the fabrica della Conserva [Cisterna].”\(^{48}\) During the decoration of the Seconda Loggia and upon Sabatini’s death in 1576, his son Mario took over the managerial role.\(^{49}\) Following Mario’s brief tenure, and beginning with payments in May 1578, Ottaviano Mascherino (1536 – 1606) directed the artists as they completed their decoration of the logge.\(^{50}\)

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\(^{46}\) For the dating of the Prima Loggia see Robert D. Meadows-Rogers, *The Vatican Logge and their Culminating Decorations under Pius IV and Gregory XIII: Decorative Innovation and Urban Planning before Sixtus V* (PhD dissertation, Chapel Hill, 1996), 225; Redig de Campos, 169; Sambin de Norcen 2011E, 181; and Serlupi Crescenzi, 152. For the Seconda Loggia see Meadows-Rogers, 225; Hess 1935, 1274-1275; and Sambin de Norcen 2011E, 181. For the Terza Loggia see Serlupi Crescenzi 1992A, 152.


\(^{48}\) “A bon conto delle pitture da farsi nella fabrica della Conserva.” ASR, CI, TS, b. 1302, f. 65. See also Sambin de Norcen 2011E, 181.

\(^{49}\) Lorenzo’s last payment is recorded on August 23, 1576 (ASR, CI, TS, b. 1304, f. 13) and his son’s payments for the logge begin on October 12, 1576 (ASR, CI, TS, b. 1304, f. 28v). See Meadows-Rogers, 225; Sambin de Norcen 2011E, 181; and Serlupi Crescenzi 1992A, 152.

\(^{50}\) Sambin de Norcen 2011E, 181.
Mirroring the embellishment of the façade, the decoration of the logge increases in richness from the lower levels up. Housing the Reverenda Camera Apostolica, the Prima Loggia is crowned with nine sail vaults frescoed with pergolas interwoven with vegetation [fig. 20]. Similar to what he would eventually realize in the Sala Bologna, Mascherino painted quadratura with fictive columns that illusionistically expand the height of the ceiling. The vines, leaves, and animals that inhabit each pergola are the work of Paolo and Matteo Bril. As Robert Meadows-Rogers notes, although the iconography of the hall is based on that of Raphael, the animals and vegetation “display an even greater species-specific naturalism.” For example, in one of the vaults, several distinct birds are glimpsed in the pergola itself, while three different dogs and a monkey sit and walk along Mascherino’s fictive architecture [fig. 21]. The use of such naturalistic precision is consistent with the underlying theme of scientific accuracy found in the Sala Bologna’s decorative program, a theme that will be explored throughout this dissertation.

For the Seconda Loggia, Sabatini again followed the lead of Raphael and decorated the walls with various grottesche, most likely painted by Marco da Faenza [fig. 22]. On the ceiling Sabatini divided each vault into five narrative compartments [fig. 23]. In emulation of Raphael’s “Bible” in the western Seconda Loggia where there are scenes from the Old Testament, here quadri riportati scenes of the Life of Christ fill each panel. In the four corners of each vault Mascherino filled the space with illusionistic architecture similar to

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51 For the decoration of the Prima Loggia see Hess 1936, 161; Meadows-Rogers, 225; Redig di Campos, 171; Serlupi Crescenzi 1992A, 152; and Agostino Taja, Descrizione del Palazzo Apostolico Vaticano (Rome: Pagliarini, 1750), 174-192.
52 Meadows-Rogers, 225.
54 Hess 1936, 161. For the decoration of the Seconda Loggia see Hess 1935, 1272; Meadows-Rogers, 225-227; Redig di Campos, 171; Serlupi Crescenzi 1992A, 152; and Taja, 192-196.
Raphael, but here painted as gray marble piers fronted by Ionic columns that reach up to a cloud-filled sky.

Gregory also commissioned the decoration of six rooms on the *secondo piano*: the two Sale dei Foconi, the two Salette dei Foconi, the small Cappellina Comune (now the Cappellina di San Lorenzo) and the Cappella Matilde (now the Redemptoris Mater) [fig. 24].

Filling the south side of this cluster are the two Sale dei Foconi, named after the braziers used to provide warmth. The two *sale* were designed to be read as a single decorative program, with scenes from the life of Gregory the Great filling each ceiling [figs. 25, 26]. Although the stuccoists remain anonymous, the paintings belong to Sabatini and his workshop. The lower walls of each room are filled with various *grottesche*, matching those found in the neighboring *loggia*. The upper walls, decorated with a frieze of landscapes, postdate the life of Gregory XIII, as indicated by the presence of the arms of Gregory XIV and Innocent IX.

To the north of the Sale dei Foconi are the two smaller *salette* of the same name. The date 1578 appears on the ceilings of each room, indicating that they were likely decorated under the supervision of Mascherino after Sabatini’s death.

My thanks to Maria Serlupi Crescenzi for her assistance in confirming the location of these rooms.


The ceiling of the first Sala dei Foconi includes *The Pilgrim’s Meal*, *The Distribution of Bread to the Romans During the Famine*, *The Dispatch of the Three Young Missionaries to England*, and *The Mass of St. Gregory*. Amongst the scenes painted on the second ceiling are *St. Michael the Archangel Appears above the Castel Sant’Angelo to Stop the Plague*, *Gregory the Great Teaches a Song to a Monk in the Presence of an Angel*, and *The Citizens of Rome Recognize Gregory the Great*.

For the Saletti dei Foconi see Cornini, de Strobel, Serlupi Crescenzi, 156; and Meadows-Rogers, 377 n. 91.

Cornini, de Strobel, Serlupi Crescenzi, 156. See also the payments for Mascherino between May 4 and August 1 of that year (ASR, CI, TS, b. 1305, ff. 75, 80; b. 1306, ff. 6, 9, 16).
painted in the panels of the gilded wooden ceilings [figs. 27, 28]. The ceiling of the first
saletta is also crowned with a large Boncompagni coat of arms.

The small Cappellina Comune, today known as the Cappellina di San Lorenzo, is
located to the west of the second Saletta dei Foconi.60 Frescoed on the walls of this
octagonal room are images of the Four Virtues and the Four Doctors of the Church, as well
as smaller grisailles of various prophets and sibyls [fig. 29]. In the three lunettes on the
upper walls are scenes of King David Playing the Harp, Moses with the Tablets of the Law, and
another papal coat of arms. On the ceiling is Christ in Glory, surrounded by angels holding
various instruments of the Passion [fig. 30].

The last of Gregory’s rooms on the secondo piano is the Cappella Matilde, rededicated
as the Cappella di Redemptoris Mater by John Paul II in 1988.61 The only frescoes that
survive there are those on the ceiling, showing a large Boncompagni coat of arms held aloft
by six putti leaning over the balustrades of a beautifully painted illusionistic balcony. The
mastery of this quadratura once again suggests the hand of Mascherino and can be compared
to his work in the Sala Bologna.

Crowning Gregory’s arm of the Cortile di San Damaso is the famous Terza Loggia,
the decoration of which continues Pius IV’s Cosmografia in the western hall completed before
his death [fig. 31].62 Together, the two wings—Pius’ to the west and Gregory’s to the
north—constitute a complete cosmography, with the Medici pope’s frescoes representing
countries east of the Prime Meridian, and the Boncompagni pope’s those to the west.

60 For this chapel see Giovanni Pietro Chattard, Nuova descrizione del Vaticano o sia della sacrosanta Basilica di S. Pietro, vol. II (Rome: Barbiellini, 1766), 183-186; Cornini, de Strobel, Serlupi Crescenzi, 157; Meadows-Rogers, 376-377 n. 91; Redig di Campos, 172; and Taja 197-198.
61 For the Cappella Matilde see Cornini, de Strobel, Serlupi Crescenzi, 157; Meadows-Rogers, 376 n. 91; Carlo Pietrangeli, “Nei Palazzi Vaticani: Il Palazzo di Gregorio XIII e la Cappella Redemptoris Mater,” Strenna dei Romanisti 51 (1990): 395-402; and Redig di Campos, 173.
62 For the decoration of the Terza Loggia see Banfi, passim; Chattard, 349-357; Hess 1935, 1275; Redig di Campos 172; and Serlupi Crescenzi 1992A, 153-154.
Giovanni Antonio Vanosino da Varese, who previously created the maps for the Medici pope, worked together with the mathematician, astronomer, and cosmographer Egnazio Danti (1536 – 1586) to design the Boncompagni cycle. In the corner and visually connecting the two halls is a monumental cross-section of the world, with the eastern and western hemispheres depicted in correspondence to the countries painted in either loggia [fig. 32]. Decorated by Niccolò Circignani, the ceiling of Gregory’s wing contains scenes of heavenly paradise, similar to those that would later be painted in the Galleria delle Carte Geografiche. Running along the upper walls is a painted frieze of The Translation of the Relics of St. Gregory Nazianzus by Antonio Tempesta and Matteo Bril, which, given the date of that procession on June 11, 1580, acts as a terminus post quem for the hall’s decoration.

Longhi’s plans for the primo and secondo piano are no longer extant, but designs for the pianterreno and terzo piano survive in the Accademia Nazionale di San Luca [figs. 33, 34]. Although neither of these drawings reflects the ultimate arrangement of rooms as Paul Letarouilly would record them in the nineteenth century, they nonetheless demonstrate Longhi’s design evolution and working method. The Sala Bologna is located in the northwestern corner of the terzo piano, marked ‘C’ on Letarouilly’s plan [fig. 35]. To the left is a small antechamber, the Sala del Congregazione, decorated with a frieze of landscapes and heraldic dragons [fig. 36], and to the right, built during the construction of the Palazzo Sisto V, is a corridor leading to the current papal residence.

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The Commission and Decoration of the Sala Bologna

Of the rooms on the terzo piano, the Sala Bologna is the largest, measuring approximately 13.35 x 8.92 meters. Strategically positioned to capitalize on the views of the Roman countryside available to the north and cityscape to the east, the room is punctuated with five large windows [fig. 37]. The three eastern windows were filled in during the construction of the Palazzo Sisto V, but the northern two continue to offer broad panoramas, now overlooking the modern neighborhoods of Prati and Monte Mario [figs. 38, 39]. Bordering the room on the south is the Loggia della Cosmografia, which overlooks the Piazza of St. Peter’s. Such views were an important aspect of the room’s design, as it has often been recorded that the Boncompagni pope enjoyed gazing at the countryside and being outdoors.

Similar to the decorative program elsewhere in the Gregorian logge, the frescoes in the Sala Bologna were primarily designed and painted by Lorenzo Sabatini. Known to contemporaries simply as “la Bologna,” the room takes its name from the majestic representations of that city frescoed on its walls. On the southern wall is the great cityscape of Bologna [fig. 7]. Mimicking the shape of the city’s medieval walls, the map is irregular in outline but its largest span measures 456 x 607 cm. Two historical scenes

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65 Or 40 x 60 palmi, as recorded in Roberto Almagià, Monumenta cartographica vaticana. IV. Le pitture geografiche murali della terza loggia e di altre sale Vaticane (Vatican City: Biblioteca Apostolica Vaticana, 1955), 34; and Chattard, 370.

66 Several sources make note of Gregory’s fondness for fresh air, including Ciappi, 101. Additionally, two avvisi indicate the pope’s habits: BAV, Urb. lat. 1048, f. 222r dated to July 27, 1580 records Gregory’s regular walks in the Cortile del Belvedere, and BAV, Urb. lat. 1049, f. 249 dated to August 24, 1581 lists his pre-dinner walks. For these avvisi see Nicola Courtright, “Gregory XIII’s Tower of the Winds in the Vatican,” (PhD diss., New York University, 1990), 86-87; and Courtright 2003, 16-18.

67 For more on Sabatini and the other artists involved in the decoration of the room, including the archival documentation of their work, see the Chapter 2.

68 As noted in the Memorie sulle pitture et fabbriche (BAV, Bonc.D.5, ff. 240r-241v); Del Palazzo Pontificio di San Pietro in Vaticano, sec. XVIII (ASR, MS. 496, f. 811); Chadtard, 370; and Tajia, 497.

69 For a discussion of the following iconography see Chapter 3.

70 Francesco Ceccarelli (2011B), “Parete Sud: Lorenzo Sabatini (probabilmente su disegno di Domenico Tibaldi): Pianta prospettica di Bologna, 1575,” in La Sala Bologna nei Palazzi Vaticani, 104. This measurement is the
border the map, with *Gregory IX Promulgating the Decretals* to the left and *Boniface VIII Delivering the Sixth Book of the Decretals to the Doctors of Bologna* on the right.\(^71\) To the west is the fresco of the Bolognese countryside (466 x 850 cm) flanked by the allegories *Pax* and *Annona* [fig. 8].\(^72\)

Between the two windows on the north side is a small perspectival view of Bologna measuring about 175 x 225 cm and unfortunately now in ruinous condition [fig. 9].\(^73\)

Completing the Bolognese iconography on the lower walls of the room is an allegory of *Bononia* seated below this panorama.\(^74\)

Little remains on the eastern wall [fig. 10], but a description by the anonymous author of the eighteenth-century *Del Palazzo Pontificio di San Pietro in Vaticano, sec. XVIII* describes its original appearance:

On the wall of the entrance there are three fake doors [the windows that were filled in during the construction of the Palazzo Sisto V] and one which introduces the way into this room, above which there are painted three logge with balustrades in perspective. There are two niches in between, with a figure inside each representing Justice and Peace. The rest of the wall is painted with other figures, including the arms of Gregory XIII and fictive reliefs of blended stones.\(^75\)

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\(^71\) Chattard, 370-371, describes the bordering scenes as follows: “On the left wall, where the door is, and corresponding to the *terze logge*, one sees two popes who are enthroned and assisting numerous processions of cardinals and prelates, and who give the codes of law to various doctors who are clothed appropriately, as Bologna has always been the state regarded as the master of these subjects.”

\(^72\) For the measurements see Francesco Ceccarelli (2011C), “Parete Ovest: Lorenzo Sabatini (su disegni di Domenico Tibaldi e Scipione Dattari): *Corografia del Bolognese*, 1575,” in *La Sala Bologna nei Palazzi Vaticani*, 124. Similar to his work with the city map, Ceccarelli offers current measurements, once again correcting those listed by Almagià 1555, 34 (525 x 695 cm).


\(^74\) The author of *Del Palazzo Pontificio di San Pietro in Vaticano, sec. XVIII* (ASR, MS. 496, f. 811) describes the wall as such: “…to the immediate right of the door we walked through, and above the two large windows with parapets corresponding in width to the Cortile de Falegnami, there is a view or perspective of the city of Bologna (from which the room gets its name) and in the space between the two windows is a figure representing Province, City, or the State of Bologna, adorned with various ornaments…” For the original Italian see Appendix 3C.

\(^75\) ASR, MS. 496, f. 811. See Appendix 3C for a transcription of the original Italian.
Located above the walls and in the intrados of the vault is a fictive loggia designed by Mascherino, in which sit ten figures painted by Sabatini [fig. 40]. Placed between paired columns of colored marble, each figure is identified by name in the center of the arch above. On the north side, above the perspective of Bologna, the Old Testament figure Seth sits next to the Egyptian god Theut. Above the eastern wall, the Egyptian goddess Isis is centered between the Titan Atlas and the Greek philosopher Thales. On the south side, above the monumental map of the city of Bologna, Anaximenes, another Greek philosopher, is painted next to the Greek astronomer and poet Aratus. On the east side, above the Bolognese countryside, sits the ancient astronomer and geographer Ptolemy, the Roman poet Marcus Manilius, and Alfonso X, a medieval Castilian king and astrologer.\footnote{These figures are discussed in Chapter 2.}

Crowning the entire room on the ceiling is a painted map of the heavens unlike any other in fresco [fig. 1].\footnote{Several Early Modern authors describe the ceiling. Egnazio Danti, commenting on Giacomo Vignola’s perspectival treatise, tells of the figures in Mascherino’s loggia, each of who gazes up at the ceiling. See Egnazio Danti, Le due regole della prospettiva pratica di M. Jacopo Barozzi da Vignola con il commentario del R.P.M. Egnatio Danti (Roma: 1583), 89-90. Chattard, 370, writes: “Existing in the middle of the superior vault is a grand oval in a field of blue, inside of which are painted the signs of the zodiac with a loggia below with columns of stone—at the base of the columns we see the writers of astrology and geography.” Taja, 497, notes: “On the vault the signs of the constellations are painted in a natural color in a grand oval that rests on various columns painted in perspective, and various fake marbles, and between which there are various symbolic figures.” Finally, the anonymous author of Del Palazzo Pontificio di San Pietro in Vaticano, sec. XVIII (ASR, MS. 496, f. 811) describes the ceiling as “[a]n oval, under which is a fictive loggia with columns of mixed stone that form arches, and below this there are diverse figures representing the different writers of astrology and geography…”} Visually supported by Mascherino’s fictive loggia, the map is displayed on a canopy with a border of decorative circles, lion heads, and female masks, and held in place by a single putto in each of the four corners of the vault. In the center and represented in allegorical form are the forty-nine constellations that were known in the Renaissance. The constellations are painted \textit{di sotto in su}, and they twist and turn, seemingly coming alive in the framed sky. The individual stars, painted in brilliant gold leaf, shine against the dark blue background and are thus highly legible from below. Such a rich and
deep blue color contrasts with the softer earth tones—mostly greens, browns, and reds—of the frescoes below, and therefore, through a difference of color, it provides a visual culmination to the decoration of the room.

Six inscriptions glorify the Boncompagni papacy and celebrate the commission of the room. Beginning in the northwest corner of the quadratura in a cartouche above Seth and circling the room in one section per arch is the inscription GRE // XIII // BONC // BONO // PC MAX // PO SVI // AN IIII // ANNO // IVBILEI // MDLXXV (Gregory XIII Boncompagni, Bolognese, Pontificus Maximus, fourth year of his pontificate, year of the Jubilee, 1575). Additionally, four emblematic inscriptions, each referring to the Boncompagni pope, appear on pendentives inside the painted loggia in the four corners of the room. Above Atlas is a papal tiara and the words SVMMA // RELIGIO, the utmost moral obligation or duty [fig. 41]. Between a laurel wreath the words PACIS // CON / SER / VA / TOR appear above Thales, referencing Gregory’s dedication to preserving peace [fig. 42]. Above Ptolemy is a temple and the words PROVI / DENTIAE, or providentia, foresight [fig. 43]. The fourth emblematic inscription, located above King Alfonso and displayed with another laurel wreath has the phrase OB // AN / NONÆ // COP / IAM, for the supply of grain [fig. 44]. Finally, an inscription around the Boncompagni dragon on the marble floor reads GREGORIUS // XIII // BONCOMPAGNUS // BONON // PONT // MAX // ANNO // IUBIL // M // D // LXXV // PONTIFICATUS // SUI // IIII (Gregory XIII Boncompagni, Bolognese, Pontificus Maximus, year of the Jubilee, 1575, fourth year of his pontificate) [fig. 45].

78 The transcription of this last emblem is erroneously described in Urban, “Soffitto: Giovanni Antonio Vanosino da Varese (progetto cartografico), Lorenzo Sabatini (esecuzione pittorica): La volta celeste della Sala Bologna,” in, La Sala Bologna nei Palazzi Vaticani, 154, as OB // AM[OREM] // NON // AD // COPIAM, for the sake of love, not riches. The new lettering is confirmed by the illustration of a papal medal in BAV Bonc. D5, f. 244r with the same motto surrounded by a wreath. The emblem PACIS CONSERVATOR, again surrounded by a wreath, is also duplicated in the same manuscript.
Use of the Room

As Nicola Courtright has noted, the majority of ceremonial rooms in the Vatican Palace did not serve a single purpose but instead could be used alternately as a meeting chamber or audience hall, a throne room, or a dining room. Gregory’s Master of Ceremonies recorded only those official meetings or audiences that took place in the Sala Regia and the Sala Ducale, making the functional purposes of his other rooms more difficult to ascertain. Consequently, given its absence in the official ledgers, Courtright has argued that the small Sala Meridiana in the Torre dei Venti was more private in nature, and a similar argument should be made for the Sala Bologna. These smaller rooms likely provided space for cardinals to gather, or for intimate meetings or meals with the most distinguished of guests.

Indeed, several clues provide evidence that the Sala Bologna served as a dining room. Gregory’s biographer Marc’Antonio Ciappi describes the pope’s fondness for dining in the Terza Loggia in the summer, enjoying the fresh air and the views its rooms provided. An avviso dated to July 30, 1580 tells of the pope’s custom of dining in the “loggia detta la Bologna.” As Maria Teresa Sambin del Norcen has argued, the two small rooms to the west of the Sala Bologna, recorded in Longhi’s second design [fig. 34] and Letarouilly’s later plan [fig. 35], were likely used as a pantry and small kitchen in service of the salon.

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80 Courtright 2003, 100.
81 Courtright 2003, 99, makes note of various avvisi that suggest the Sala Meridiana was a place for the pope to receive illustrious visitors.
82 Ciappi, 100-101. See also Courtright 2003, 16-18.
83 BAV, Urb. lat. 1048, f. 226, first published in Courtright 1990, 87, 266 n. 87.
the display of celestial iconography on dining room ceilings has a long and impressive heritage, dating back to Emperor Nero’s Domus Aurea (c. 64 AD). Such artistic heritage may likewise suggest a relationship of function and decoration in Gregory’s room to those from the ancient Roman past.

Regardless of its specific use during the pontificate of Gregory XIII, the size and location of the Sala Bologna suggest that it was not a room for large meetings but was instead a place where the Boncompagni pope might entertain personal acquaintances or the most important of guests. The room’s cartographic iconography is overtly personal, glorifying Gregory’s Bolognese heritage. In this regard it contrasts with the broader propagandistic message displayed on the walls of the Galleria delle Carte Geografiche commissioned during his reign.

From Agostino Taja we know that various rooms in the Cortile di San Damaso were used to house visiting dignitaries during the eighteenth century.85 Moreover, in his description of the room, Giovanni Pietro Chattard gives an indication of the traffic flow in and out of the Sala Bologna two centuries after its decoration. He writes that, “On the left wall, where the door is… are two popes enthroned and assisting numerous processions of cardinals.”86 Such a description indicates that visitors entered the sala via the door on the south wall, directly from the Loggia della Cosmografia. In contrast, the anonymous writer of Del Palazzo Pontificio di San Pietro in Vaticano, sec. XVIII from the same century notes the use of a different door. He explains “…to the immediate right of the door we walked through […] is a view or perspective of the city of Bologna.”87 Given that the veduta of Bologna is frescoed on the northern wall, this record indicates passage through the eastern door,

85 Taja, 198-205. See also Cornini, de Strobel, Serlupi Crescenzi, 156; and Eitel-Porter, 21.
86 Chattard, 370-371.
87 ASR, MS. 496, f. 811.
connecting to the Palazzo Sisto V. An entrance by way of the papal residence suggests that the Sala Bologna was still visited by only a select few.

During the nineteenth century, the function of the Sala Bologna changed. In 1822, Pius VII (r. 1800 – 1823), after his return from Savonesi exile, used the Sala Bologna to display a selection of paintings, including Raphael’s *Transfiguration* (1518-1520) and Domenichino’s *Communion of St. Jerome* (1614), that were repatriated from Napoleonic France [fig. 46].

For this temporary exhibition space tapestries were hung to cover the frescoes on the eastern wall, and as such the wall paintings began to deteriorate. In 1885 Leo XIII (r. 1878 – 1903) removed the tapestries, but, because of the damaged state of the frescoes, he ordered their reinstallation. The eastern frescoes were permanently uncovered in 1909 when Raphael and Domenichino’s paintings were removed and installed in the newly established Vatican Museum *Pinacoteca*.

The Sala Bologna continues to serve an official function for the papacy today, acting as a room for formal meetings and gatherings. This purpose, together with its close proximity to the modern papal apartments, makes the room inaccessible to the public.

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89 By contrast we know that this fresco remained in excellent condition in 1739 when the Bolognese cartographer Andrea Chiesa was sent to Rome to make a copy of the fresco. Chiesa’s map survives in the Archivio di Stato di Bologna, and was later used as an aide in the restorations in 1943. See Roberto Almagià, *Documenti cartografici dello Stato Pontificio* (Vatican City: Biblioteca Apostolica Vaticana, 1960), 16; Almagià 1955, 34; Francesco Ceccarelli (2011A), “La Bologna dipinta. Città e imagine cartografica nel tardo Cinquecento,” in *La Sala Bologna nei Palazzi Vaticani*, 41; Francesco Ceccarelli 2011C, 124; and Comelli 1895, 162.

90 Almagià 1955, 34; Comelli 1914, 32.

91 Comelli 1914, 41; Comelli 1895, 162-163.

92 My thanks to Maria Serlupi Crescenzi for this information.
Restoration of the Ceiling

Two major restoration campaigns have been undertaken on the ceiling and intrados of the vault. Initial inspections on February 2, 1934 indicated that large cracks had formed in the ceiling and that the color of the fresco had faded over time [fig. 47]. Crossbeams were constructed above the ceiling to stabilize the vault, and iron plates were inserted throughout the ceiling to reinforce the structure of the surface. The majority of these plates were installed on the surface in sections of the painted sky where there were no allegories depicted [fig. 48]. The figure of Boötes, however, had to be completely removed so that two large plates could be inserted [fig. 49]. He was subsequently reattached to the ceiling, and today a discoloration of the paint around the constellation remains visible [fig. 50].

An examination of the ceiling also indicated that the humidity and lack of air circulation in the room had damaged the frescoes, causing the surface to swell. To correct this problem, and to prevent future warping, fifteen small ventilation pipes were added to the perimeter of the vault.

During a second series of restorations in 1939 a major discovery was made about the ceiling and its production. As indicated by the solid white lines in figure 51, restorers located the original seams in the frescoed loggia, indicating the individual giornate. Based on these findings, the speed with which Sabatini and his workshop painted becomes astonishingly clear, demonstrating that the figures within the quadratura were each frescoed in a single day.

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94 For the restoration of 1939 see B. Biagetti, “Pitture Murali Restauri: Sala Bolognese,” in Rendiconti della pontificia académia romana di archeologia (serie III), XV, AA 1939 (1940) (Vatican City: Tipografia Poliglotta Vaticana, 1940), 240-243.
During this same restoration campaign, older and arbitrary restorations that had altered the color of the ceiling were removed, and as a result the original blue of the background reappeared. This procedure also revealed that many aspects of the ceiling, such as the stars, the zodiacal glyphs, and various details of the figures, were originally painted in gold leaf rather than the yellow tint apparent at the time. Gold leaf was therefore reapplied, bringing the ceiling back to its original luster. Finally, the sections of the blue sky that had been sacrificed for the application of the metal plates in 1936 were repainted.

**Factum Arte and the Museo della Storia di Bologna**

The latest project involving the Sala Bologna, and coinciding with the publication of the recent monograph *La Sala Bologna nei Palazzi Vaticani: Architettura, cartografia e potere nell’età di Gregorio XIII*, 2011, was the high-resolution digital scanning of each decorated surface in the room. Factum Arte, a digital conservation company founded by Adam Lowe and based in Madrid, was commissioned to photograph the room for the above-mentioned publication, as well as to create a full-scale facsimile of the southern wall to be installed in the new Museo della Storia di Bologna, in Bologna. Over the course of four days a “non-contact” campaign of photography captured the entire decorative program in 6,000 unique images recorded at 33 billion pixels, producing an archive of over 200GB of data [fig. 52]. A panoramic camera with a 600mm lens, positioned at a distance of eight meters and set up with a resolution of 340 dpi at a 1:1 ratio, created a catalog of imagery with never-before-seen details.

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95 For this project see Factum Arte’s website http://www.factum-arte.com/eng/default.asp. Among other projects, the company has created facsimiles of Caravaggio’s Matthew Cycle in 2009 for the Municipality of Caravaggio; of Veronese’s *Wedding at Cana* in 2006 for the Fondazione Giorgio Cini; and of various tombs in Egypt’s Valley of the Kings.

For the facsimile of the city map, a Nub3D SIDO structured light scanner was used to record the imagery of the southern wall and its surface texture, including brushstrokes, cracks, and areas of decay. The process of creating the life-size facsimile then began in Factum Arte’s lab in Madrid, where extensive color matching was performed to ensure that the reproduction would match the hue of the original fresco and would also reflect ambient light appropriately [fig. 53]. The joining seams were over-painted to make certain that no visible joints were evident in the finished reproduction, and small details, including the roofs of ecclesiastical buildings, were hand painted in gold leaf. Upon completion, the facsimile was installed in the entrance of the Museo della Storia di Bologna, which opened to the public on January 28, 2012 [fig. 54]. This endeavor allows visitors to view one of the most remarkable frescoes in Gregory’s treasured Sala Bologna, a work that is otherwise inaccessible to the public.

97 Lowe, 91.
98 Lowe, 93.
Chapter 2: Mapping the Heavens: The Ceiling of the Sala Bologna

In this chapter I will explore all aspects of the ceiling in the Sala Bologna. Following a study of the work of the primary artists involved in the project, I will analyze the iconography of the ceiling so as to give insight into heretofore-unexplored details. The astronomers painted in the *quadratura* will also be identified, examined, and explained with reference to their inclusion. Finally, I will consider the *quadratura* itself, and how it represents the Bolognese specialty of perspectival illusionism brought to Rome.

Part I: The Artists

Three artists collaborating together created the ceiling in the Sala Bologna. Giovanni Antonio Vanosino da Varese (active in Rome 1562-1590) plotted the constellations in the celestial map, Ottaviano Mascherino (Bologna 1536 – Rome 1606) designed the *quadratura* in the intrados of the vault, and Lorenzo Sabatini (Bologna c. 1530 – Rome 1576) oversaw the entire program and with his workshop frescoed the imagery.

Vanosino

Unlike the better known Sabatini and Mascherino, little is known about Giovanni Antonio Vanosino, and therefore a brief exploration into his training and artistic career will provide insight into his contribution in the Sala Bologna. Other than his place of birth in Varese nothing is known of his life and artistic activity before arriving in Rome in the early 1560s. In the papal city he is first documented in the payment records of Pope Pius IV for

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*This section is an expansion of my research first published as “Giovanni Antonio Vanosino da Varese,” in *La Sala Bologna nei Palazzi Vaticani*, 178-179. The artist is variously called Giovanni Antonio da Varese, il Vanosino, Antonio Vanosino da Varese, and Giovan Antonio Varesi.*
his cartographic cycle in the eastern Terza Loggia. It is unknown, however, whether Pius IV called the artist to Rome specifically for work in the Terza Loggia or if he caught the attention of the Medici pope after his arrival. Given the importance of the commission, however, it can be assumed that the painter from Varese was already known for his map-making expertise. Vanosino worked in the Loggia for roughly a year and a half, as evidenced by payments between December 21, 1562 and July 23, 1564. On July 24, 1565 and September 27, 1565 he was paid for a fresco depicting the concluding session of the Council of Trent—his only known figural work—on the walls of the same loggia [fig. 55].

Based on the recommendation of the Humanist and antiquarian Fulvio Orsini to Cardinal Alessandro Farnese, Vanosino next executed a series of terrestrial maps in the Sala del Mappamondo at the Cardinal’s palace in Caprarola in 1574. He also worked in the Vatican during the pontificate of Gregory XIII, beginning with restoration work in the Terza Loggia, followed by various decorations for the Cappella Paolina. Additional

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100 ASR, CI, Spese Minute, b. 1496: ff. 5r, 11v, 12r, 14r, 15r, 17v, 20v, 21r, 21v, 23v, 24v, 25v, 26v, 27v, 28r, 29r, 29v, 30r, 31r, 31v, 32v, 33r, 34r. See also Roberto Almagià, Monomenta cartographica vaticana. IV. Le pitture geografiche murali della terza loggia e di altre sale Vaticane (Vatican City: Biblioteca Apostolica Vaticana, 1955), 4, n. 2; Bartolomeo Podestà, Le Mappe delle Logge Vaticane (Florence: Ufficio della Rivista Europea, 1877), 39; and Maria Serlupi Crescenzi, “Il Palazzo e le Logge,” in Il Palazzo Apostolico Vaticano, ed. Carlo Pietrangeli (Florence: Nardini Editore, 1992A), 152.


103 Payment to Vanosino on November 21, 1573 for the repair of the ceiling and walls in the Terza Loggia caused by fire damage: ASR, CI, TS, b. 1301, f. 36v. See also Florio Banfi, “The Cosmographic Loggia of the Vatican Palace,” Imago Mundi 9 (1951): 29; Bertolotti 1985, 116 (erroneously cites f. 35); Podestà, 42; and Maria Teresa Sambin de Norcen (2011E), Appendice 1, in La Sala Bologna nei Palazzi Vaticani, 180.
commissions from the Boncompagni pope followed, including the design of the celestial ceiling in the Sala Bologna in 1575, and the completion of the cycle of maps in the Terza Loggia with Egnazio Danti in the 1580s. The last documents to mention the artist are those of the Altemps family for a series of maps commissioned in the 1590s that demonstrate his continued patronage and cartographic reputation.

Vanosino would have learned the painter’s trade in post-Tridentine Lombardy, where Cardinal Carlo Borromeo, Archbishop of Milan, promoted the accuracy, clarity, and pedagogic value of religious painting. Since his first commission upon arrival to the papal city was a series of maps, it is presumed that he also learned his cartographic skills in the north. Indeed, as Emanuela Casti has demonstrated, in the constantly changing political environment of Early Modern Italy, maps were fundamental tools for sovereigns to claim ownership over their domains and to demonstrate their territorial control. As already seen in Giovanni Pisato’s c. 1440 map of the Lombard region, the accurate illustration of a city’s security and where these defenses were needed was the most ubiquitous type of map-making in Lombardy in the Quattrocento.

104 Payments to Vanosino for the Cappella Paolina on May 15, 1574 (with Antonio Gerosa, Fiovanni dalla Piana, and Martino Vetraro) (ASR, CI, TS, b. 1301, f. 76r); May 26, 1577 (ASR, CI, TS, b. 1304, f. 73v); and May 22, 1580 (ASR, CI, TS, b. 1308, f. 124). An additional payment on May 4, 1584 for Vanosino’s work in the Cappella Paolina that has thus far not been connected to Gregory XIII is ASR, CI, GT, b. 15, ff.2r-7v.

105 Evidence for Vanosino’s work in the Sala Bologna comes from the Memorie sulle pitture et fabbriche, BAV, Bonc. D5, ff. 240r-241v, on which see Appendix 3A.

106 Payments to Vanosino on December 14, 1584 (ASR, CI, GT, b. 15, f. 8r-10v); and December 23, 1585 (ASR, CI, TS, f. 31r). See also Almagià 1955, 5; Banfi, 28; Bellucci, 73, 79; Bertolotti 1985, 117; Partridge, 444; Podestà, 42; and Seralpi Crescenz, 1992A, 152-153.

107 The maps are no longer extant. See the payments to Vanosino on January 4, 1590 (for work done on December 22, 1589) and July 23, 1590 (Archivio Altemps in Ballese, Libro Mastro, 1590-1593, ff. 24-25). See also Bellucci, 82, n. 41, 83, n. 42.

108 Although the region was not a major center of artistic activity at the time, there were several painters working with whom Vanosino may have apprenticed, including Boccaccio Boccaccino (c. 1466 – 1525); Romanino (c. 1484 – c. 1560); Bramantino (c. 1465 – 1530); Cesare da Sesto (1477 – 1523); Ferrari Gaudenzio (c. 1475 – 1556); and Giovanni Paolo Lomazzo (1538 – 1600). See Giorgio Vasari, Lives of the Painters, Sculptors and Architects, trans. Gaston du C. de Vere, vol. 2 (New York: Knopf, 1996), 463-476.


110 Preserved in Treviso, Biblioteca Comunale, MS. 1497.
Perhaps most significant for Vanosino’s formation as a painter of maps was the Veronese artist and cartographer Cristoforo Sorte’s (c. 1506 – c. 1594) development of new surveying methods that improved the accuracy of printed maps.¹¹¹ Unlike their predecessors that often portrayed an ideal world with fantastical beasts and florid ornamentation, these new cartographic examples represented the landscape as it actually appeared and thus became immediately popular within the province. It was Sorte who first represented the differing elevations of landforms in his maps,¹¹² and it was with this cartographic knowledge that Vanosino arrived on the artistic scene in Rome in the 1560s.

Aside from the documented commissions, three other works have traditionally been attributed to the artist: the ceiling frescoes in the Sala Bologna; those of the Sala del Mappamondo at Caprarola (1574); and a celestial globe (c. 1567) now in the collection of the Vatican Museums.

Based on a notation in the documents of the Memorie sulle pitture et fabbriche di Gregorio XIII, Jacob Hess was the first to suggest that Vanosino painted the ceiling in the Sala Bologna, and subsequent scholars have followed suit.¹¹³ This Memorie is the only source to mention the Vatican ceiling, and its language is ambiguous at best. It notes Sabatini’s organization of the overall decorative program as well as his painting of many scenes, with the exception of the ceiling, which was allocated to Vanosino: “…tutta l’opera di pitture fu ordinata e designata da Lorenzo Sabbatini, e molte cose fatte di sua propria mano, ma li

¹¹¹ For Sorte see Jürgen Schulz, La Cartografia tra scienza e arte: Carte e cartografi nel Rinascimento italiano (Modena: Panini, 1990), 65-95.
¹¹² Casti, 874.
dodeci segni celesti nominati li ordinò Giovan Ant[oni]o Varesi.”

Francesca Fiorani correctly interpreted the meaning of this text, noting that the verb *ordinare* indicates that Vanosino composed and/or conceptualized the ceiling (using his cartographic skills to accurately plot each of the constellations), but did not execute it. Unlike the work credited to Sabatini in the first part of the phrase with the verb *designare*, there is no explicit mention of Vanosino painting the fresco. Moreover, there are repeated payments for Sabatini and his apprentices for their work in the Sala Bologna, but nothing for Vanosino. Finally, given that Vanosino was known primarily for his cartographic frescoes, the case for Sabatini, a favorite figural painter of Gregory XIII, and his workshop is strong.

Another work often attributed to Vanosino is the celestial ceiling of the Sala del Mappamondo in the Palazzo Farnese at Caprarola, which shares the same general composition as that in the Sala Bologna [fig. 56]. As recorded in the letters between Fulvio Orsini and Cardinal Farnese on September 2 and September 6, 1573, Vanosino was given the commission for the terrestrial maps to be frescoed on the walls [fig. 57]. Loren Partridge and Tiziana Bellucci have noted the presence of a Lombard scale of miles on the map of Italy on the northwestern wall of the room, as well as the special attention paid to the cities of that region. Neither of these details is found in the maps that were likely used as models and therefore they serve as a type of signature for the artist from Varese. The painter of the ceiling, however, is not documented, and therefore his identity has been

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114 For the text of the *Memorie sulle pitture et fabbriche* see Appendix 3A.
116 For Sabatini’s payments see ASR, CI, TS, b. 1301, ff. 6r, 10r, 14r, 24v, 30v, 51v, 65v, 68r, 74v; b. 1302, ff. 10r, 11v, 14r, 27r, 30v, 46r, 53; b. 1303, ff. 10v, 13r, 15r, 25v, 36r, 45v, 56v, 60r, 65r.
117 For the letter of September 2 see Boselli, 62-62; for the letter of September 6 see Ronchini and Poggi, 54-56.
118 Partridge, 416; Bellucci, 73.
debated. Many scholars have argued for Vanosino’s hand,\textsuperscript{119} but based on the contemporary poem \textit{La Caprarola} (c. 1585-1589) by Ameto Orti,\textsuperscript{120} and the attribution by Baglione in his 1642 \textit{Lives},\textsuperscript{121} both of which name Giovanni de’ Vecchi (1536 – 1615) from Borgo San Sepolcro as the artist, Fritz Baumgart’s and Loren Partridge’s arguments for this artist’s hand are convincing.\textsuperscript{122} Indeed, when the figures at Caprarola are compared with other known works by de’ Vecchi, striking similarities arise.\textsuperscript{123}

The last work often assigned to Vanosino is the so-called Altemps Globe, named after its presumed patron, and originally attributed to Giulio Romano [fig. 58].\textsuperscript{124} Operating under the assumption that Vanosino painted the ceiling in the Sala Bologna, Hess was the first to put forward the hypothesis of Vanosino’s responsibility for the globe based on the stylistic similarities between the two as well as the artist’s residency at the Vatican at the time of the globe’s plausible dating.\textsuperscript{125} However, since Sabatini was the likely author of the Vatican ceiling, Hess’ attribution of this globe should be reevaluated.


\textsuperscript{121} Giovanni Baglione, \textit{Le vite de’ pittori, scultori et architetti dal pontificato di Gregorio XIII del 1572 in fino a’ tempi di Papa Urbano Ottavo nel 1642} (Città del Vaticano: Biblioteca Apostolica Vaticana, 1642), 127.

\textsuperscript{122} Baumgart, 68, 100; Partridge, \textit{passim}.

\textsuperscript{123} Compare, for example, the ceiling figures with those in de’ Vecchi’s \textit{Saint Sebastian} in Sant’Andrea della Valle, both of which portray long and lean proportions as well as exaggerated musculature. Moreover, the figures within the mythological scenes on the upper walls at Caprarola, which are widely believed to be by de’Vecchi, match the proportions and shading as those on the ceiling. In addition, the figure of Capricorn is identical on the ceiling and in the mythological panel of the same name, as are the horses of Equeules and Pegasus to those found in the panel of Libra.

\textsuperscript{124} The most recent scholarship on the globe is Ileana Chinnici, ed. \textit{Astrum 2009: Astronomy and Instruments: Italian Heritage Four Hundred Years After Galileo} (Livorno: Sillabe, 2009), 135.

\textsuperscript{125} Hess, 407. Scholars working off of Hess’ theory include Bellucci, 73; Chinnici, 135; and Arnold Nesselrath, “L’interesse per la scienza e la musica al tempo di Raffaello,” in \textit{Raffaello in Vaticano} (Milan: Electa, 1984), 70-72.
Sabatini\textsuperscript{126}

We have few details of Lorenzo Sabatini’s early life, including his date of birth, or to which artist he may have been apprenticed. Of his early career in Bologna, the commission of a frieze of the Storia di Ciro in 1570 at the Palazzo Vizzani would prove to be influential for his work in the Sala Bologna. It was here that Sabatini would have first been exposed to the work of Tommaso Laureti, who was influential for the Sala Bologna’s quadratura, on which Sabatini and Mascherino closely collaborated.

In the summer of 1572 Vasari called Sabatini to Florence to assist with the cupola frescoes in Santa Maria del Fiore. The two had previously collaborated in 1565 on the frescoes in the Palazzo Vecchio in commemoration of the wedding of Cosimo I and Giovanna of Austria, and the elder master’s stylistic influence on Sabatini’s work is evident from this period onward. For the cupola, Vasari assigned various preliminary designs to Sabatini, but the Bolognese artist’s main role in the project was the organization and administration of the large workshop of assistants and apprentices. This would prove invaluable experience for Sabatini’s management of his own large workshop in Rome.

After the completion of his work on the cupola, Sabatini returned to Bologna, but Vasari called upon him again in February of 1573, this time asking him to Rome for his assistance in completing the fresco cycle in the Sala Regia for the newly elected Gregory

XIII. Although Vasari’s summons brought him to Rome, Sabatini quickly caught the attention of the Boncompagni pope and became a favorite; as the archival evidence indicates, he was the only painter working in the Vatican Palace during this time to receive a regular monthly stipend. Sabatini spent the remainder of his life in Rome painting and overseeing a variety of projects for Gregory XIII, including the completion of the frescoes in the Cappella Paolina (1573); the Gregorian Logge (1575-1576); the Sala Ducale (1574-1575); the Sala Bologna (1575); and the two Sale dei Foconi (1576).

Evidence for Sabatini’s work in the Sala Bologna comes from three primary sources. The first are the payment records mentioned above. While they do not mention the Sala Bologna explicitly, the documents list regular payments to Sabatini during the time of the room’s painting. More specifically, the Memorie sulle pitture et fabbriche states that Sabatini coordinated the program of the Sala Bologna and that he also painted many of the frescoes. Additionally, from Egnazio Danti’s commentary on Giacomo Vignola’s Le due

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128 For his monthly stipend between June 1573 and his death in August 1576 see the following payments: ASR, CI, TS, b. 1301, ff. 6r, 10, 14r, 24v, 30v, 51v, 65v, 68r, 74v; b. 1302, ff. 10r, 11v, 14r, 27r, 30v, 34v, 46r, 53; b. 1303, ff. 10v, 13r, 15r, 25v, 36r, 45v, 56v, 60r, 65r; b. 1304, f. 8, as documented by Sambin de Norcen 2011E, 180.


130 There are no specific locations (names of rooms or titles of frescoes, etc.) attached to Sabatini’s payments, but the following records help create a timeline of his work in the Cortile di San Damaso. As noted by Sambin de Norcen 2011E, beginning on March 26, 1575 there are regular payments made to the artist in addition to his monthly stipend for paintings in the new building, i.e., the Cortile di San Damaso (“a bon conto delle pitture da farsi nella fabrica della conserva [cisterna]” (ASR, CI, TS, b. 1302, ff. 65)). Following this are additional payments for his painting in the hall (ASR, CI, TS, b.1302, 69, 71, 74v; b.1303, 5v, 7v, 9, 10, 12v, 14v, 15v, 17). On October 14 he is paid for all of his work in the “gallarea” (ASR, CI, TS, b. 1303, f. 21v). In November he receives payments for work in the Prima Loggia (ASR, CI, TS, b. 1303, ff. 23, 25, 28), and in December for the Seconda Loggia (ASR, CI, TS, b. 1303, ff. 37v, 39v, 42, 48, 58v, 60, 68, 72; b. 1304, 6v, 10v).


132 “…tutta l’opera di pitture fu ordinata e designata da Lorenzo Sabbatini, e molte cose fatte di sua propria mano…” For the text see Appendix 3A.
regole della prospettiva pratica, we learn that the quadratura of the room was designed by Mascherino but painted by Sabatini.\textsuperscript{133}

Stylistic analysis further supports Sabatini’s personal contributions in the Sala Bologna, especially in the astronomers of the fictive loggia.\textsuperscript{134} Originally attributed to Federico Zuccari, two drawings, now located in the Hessisches Landesmuseum in Darmstadt, have been published and identified by Lucia Marinig as Sabatini’s preparatory sketches for the figures of Theut and Atlas [figs. 56, 60].\textsuperscript{135} The figures here are isolated from the surrounding architecture in which they would eventually be painted, confirming the fact that these two different types of design—quadratura and figural work—were divided between Mascherino and Sabatini respectively.

The positioning and location of Sabatini’s astronomers in the Sala Bologna loggia echo those found in the Sala di Ulisse in the Palazzo Poggi in Bologna painted by Pellegrino Tibaldi in 1554-1555 [figs. 61, 62]. However, in contrast to Sabatini’s earlier Bolognese work that shows a lighter color palette and a lack of articulated musculature in the bodies,\textsuperscript{136} the style of his Vatican figures demonstrates the heavy influence of contemporary Mannerist painting in Rome. Since the Bolognese artist was employed in the Sala Regia with Vasari he would have been exposed to other fresco cycles in the Vatican. The Sala Bologna loggia figures show exaggerated musculature, sharply defined facial features, and they wear brightly

\textsuperscript{133} Egnazio Danti, Le due regole della prospettiva pratica di M. Jacopo Barozzi da Vignola con il commentario del R.P.M. Egnatio Danti (Roma: 1583), 89. For the relevant text see Appendix 3B.


\textsuperscript{135} Inv. AE 1533 and AE 1534. Lucia Marinig, “Due disegni di Lorenzo Sabatini per gli affreschi della sala Bologna in Vaticano,” in Scritti di storia dell’arte in onore di Jürgen Winkelmann (Naples: Paparo Edizioni, 1999), 185-195. To support her argument, Marinig compares the Hessisches drawings with others of Sabatini’s hand, including the preparatory sketch of Sant’Antonio da Padova (Uffizi, Gabinetto dei Disegni e delle Stampe, inv. 1466 F.), and that of a woman’s head (British Museum, inv. 271900).

\textsuperscript{136} See for example the Circumcision painted for Santa Lucia in 1564 and now in the Bob Jones University Museum in Greenville (inv. 104.1/59.153).
colored clothing that often clings to the body. Such characteristics reveal the influence of Michelangelo, especially that artist’s work in the Cappella Paolina, where Sabatini was also employed. As Marinig points out, Sabatini’s twisting torsos are especially similar to those of Michelangelo’s Prophets and Sibyls in the Sistine Chapel. Moreover, several iconographic details reveal the Bolognese artist’s careful study of Raphael’s Stanze. For example, Sabatini’s figure of Theut, whose hair appears to be caught in a slight breeze, recalls the hair of the youth leaning against the wall and writing on his knee on the right side of Raphael’s School of Athens [fig. 63].

Details regarding Sabatini’s workshop in the Sala Bologna, including the number of assistants and their identities, remain unclear. A comparison between the loggia figures and the constellations on the ceiling, however, reveals a difference in style, and thus suggests different and/or multiple hands. Unlike the finely articulated and advanced forms of the various astronomers and ancient gods, the majority of the constellations are simpler and less sophisticated in both form and articulation. For example, Antinous, Auriga, Cepheus, and Orion lack detail in both facial features and musculature. Such striking differences suggest that while Sabatini personally attended to the loggia, his workshop was likely responsible for many of the constellations painted in the center.

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137 Marinig, 188.
138 Malvasia, 196-197, suggests that one of Sabatini’s apprentices, Denijs Calvaert, was in charge of organizing the painters.
139 The exception to this rule is the figure of Perseus, whose form closely resembles those of Sabatini’s loggia figures and therefore was likely painted by the master artist himself.
140 The sophisticated perspective of the Phaethon group, however, suggests the hand of Sabatini.
Mascherino\textsuperscript{141}

After beginning a career in both architecture and painting in Bologna, Mascherino arrived in Rome in 1574, following the election of the Boncompagni pope. The artist’s perspectival designs in the Vatican, both in the Sala Bologna and later in Gregory’s Logge (c. 1575 – 1577), signal the introduction of the Bolognese quadratura style to the papal city and are the first examples of illusionistic architecture in Rome since Raphael’s Loggia.\textsuperscript{142}

Mascherino’s father Giulio worked as a mason with Giacomo Vignola in 1547 on the construction of a bridge over the Bolognese river Samoggia, and thus it was during his early and formative years that the young Mascherino would have been introduced to Vignola’s theories, including those on illusionistic perspective painting.

The primary evidence for Mascherino’s participation in the Sala Bologna comes from Danti’s commentary on Vignola’s perspectival treatise.\textsuperscript{143} Here Danti writes how Sabatini painted the loggia after Mascherino’s careful design. Moreover, we learn that soon after the Sala Bologna Mascherino abandoned painting for architecture as a result of his failing eyesight.\textsuperscript{144} Indeed, the artist was appointed papal architect for Gregory XIII upon the death of Martino Longhi in 1577.


\textsuperscript{143} Danti, 89-90.

\textsuperscript{144} Danti, 89. See also Prosperi Valenti Rodinò, 92; and Wasserman 1966, 3.
Mascherino’s design in the Sala Bologna clearly reflects an influence from the *quadratura* in Pellegrino Tibaldi’s Sala di Ulisse in the Palazzo Poggi (1554-1555) and Tommaso Laureti’s Sala Senatoria in the Palazzo Vizzani (c. 1562), both in Bologna, as well as Raphael’s Loggia in the Vatican.\(^{145}\) It is especially clear that Laureti inspired him, as the Sala Bologna design is a close replica of this earlier Bolognese example. Danti compares the two and details the similarities noting that the only difference is in the number of arches and the ordering of the columns.\(^{146}\) Danti further remarks on Mascherino’s *quadratura*, explaining how the curvature of the columns corrects itself when viewed from below.\(^{147}\) Moreover, he calls Laureti’s example in the Sala Senatoria a paradigm of illusionistic architecture on a flat ceiling, but he uses the Sala Bologna as an example of *quadratura* projection on a concave vault, and remarks that it is the latter of the two that is the more difficult to paint convincingly.\(^{148}\)

It is also from Danti that we gain insight into Mascherino’s working process, including how the artist followed Vignola’s methods and modified his design directly *in situ* to correspond to the specific shape and concavity of the vault.\(^{149}\) Moreover, Danti describes Mascherino’s construction and use of a quarter model of the ceiling so as to study the light and shadow with the utmost accuracy.\(^{150}\) A drawing attributed to Mascherino and now in the Biblioteca Comunale di Palermo undoubtedly reflects this model as it depicts one corner of the ceiling and shows the placement and dimensions of the paired columns, as well as a scale for the loggia [fig. 64].\(^{151}\) Considering the precision of the design, as well as the absence of Sabatini’s figures and vegetation in the pergolas, Prosperi Valenti Rodinò argues that this

\(^{145}\) Prosperi Valenti Rodinò, 92.

\(^{146}\) Danti, 87, 90.

\(^{147}\) Danti, 89.

\(^{148}\) Danti, 89. See also Pigozzi, 49.

\(^{149}\) Danti, 89-90.

\(^{150}\) “…egli fece un modello di rilievo d’un quarto di essa volta…” Danti, 90.

\(^{151}\) For this drawing see Prosperi Valenti Rodinò, 92.
drawing is a preparatory sketch. Prosperi Valenti Rodinò’s argument is strengthened when this sketch is compared with a drawing now in the Albertina Gallery that is likely a study of the completed quadratura given its inclusion of these additional elements [fig. 65].

**Part II: A Map of the Universe: The Iconography of the Ceiling**

Displayed on a red and blue canopy with a border of decorative circles, lions heads, and female masks, the map of the heavens painted on the ceiling of the Sala Bologna crowns the entire room and is visually held in place by a single painted putto in each of the four corners of the vault [fig. 1]. Represented here is the entire cosmic sphere, with the northern celestial hemisphere painted in the center and the southern hemisphere broken into two crescents and painted on either side. Comparing this orientation to any modern terrestrial map shaped as an oval, one finds that the outer (southern) crescents of the ceiling wrap around the back of the central (northern) hemisphere and connect. This is demonstrated by the constellation Gemini, wherein the feet of the twins appear on the right edge of the map and their bodies on the left.

The sky is painted from an outer-celestial point of view, meaning the constellations are oriented as if viewed from the heavens above rather than from the Earth below. This perspective is used in the depiction of the constellations themselves, all of which face the opposite direction from how one would observe them from Earth, and also in the reverse ordering of the zodiac. Outer-celestial positioning originated in celestial globes, and as Anna Herlihy notes, this point of view was the standard for Renaissance mapmaking.

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152 Architekturzeichnungen unbekannter Italiener, Mappe IX, Inv. 1399. For this drawing see Ulrike Knall-Brskovsky, *Italienische Quadraturisten in Österreich* (Wien, Köln, Graz: Böhlau, 1984), pl. 7.

Filling the ceiling are forty-nine constellations, forty-eight of which were originally listed by the ancient astronomer Ptolemy in his *Almagest* (c. 150 AD).\(^{154}\) Based on what he observed with the naked eye in the Mediterranean, Ptolemy’s star catalog named 1028 individual stars located in forty-eight unique constellations, including the twelve constellations of the zodiac, twenty-one constellations in the northern hemisphere, and fifteen to the south. Given his location of observation, the ancient astronomer was unable to view the entirety of the southern hemisphere, thus explaining the smaller number of southern constellations listed in his catalog. The *Almagest* remained the authoritative astronomical source into the sixteenth century, and the Sala Bologna follows this catalog not only in the identity of the constellations, but also in their hemispherical location: the bordering southern crescents of the ceiling fresco contain fewer constellations than the northern hemispherical circle in the center.

In addition to the Ptolemaic constellations, the Sala Bologna also includes the constellation Antinous.\(^{155}\) Not a canonical constellation, Antinous was added to the sky by Emperor Hadrian in 132 AD after he lost his young lover to the Nile River in the year 130 AD. The constellation first appears in Early Modern cartography with the 1536 globe of German cartographer Caspar Vopel (1511 – 1561).\(^{156}\) Completing the figural iconography of

\(^{154}\) See Appendix 1 for a diagram of the ceiling and listing of each constellation. Compare Ptolemy’s forty-eight constellations with the eighty-eight modern constellations in use today.

\(^{155}\) Jacob Hess 1967, 409, erroneously identifies fifty-three constellations in the Sala Bologna. Although he does not count Antinous, he separates Argo into four individual constellations and Serpens into two. This mistake is a result of Hess’ use of a modern list of eighty-eight constellations, which includes these multiple divisions. This numbering is not what Ptolemy listed, and more importantly, it is not what those in the Renaissance would have known. Subsequent scholars have noted Hess’ unusual numbering, including Paolo Colona and Marcella Fioravanti, “La volta celeste della sala del Mappamondo nel palazzo Farnese di Caprarola,” Biblioteca e Società 27 (2008): 13, n. 49; and Warner 1971, 337, n. 3.

\(^{156}\) Elly Dekker, “The Demongenet Tradition in Globe Making,” in *Globes at Greenwich: A Catalogue of the Globes and Armillary Spheres in the National Maritime Museum, Greenwich*, ed. Elly Dekker (New York: Oxford University Press, 1999B), 71. Vopel also added the constellation Coma Berenices to his globe, bringing his total number to fifty. Richard Hinckley Allen mistakenly suggests that the Flemish mapmaker Gerard Mercator (1512 – 1594) was the first to introduce the constellation in 1551. See *Star Names: Their Lore and Meaning* (New York:
the ceiling is a representation of The Fall of Phaethon, which, although not a constellation, is an allegorical warning against hubris commonly painted on ceilings.

Between the constellations golden stars fill the background of the ceiling, and the Milky Way, painted as a grayish-white cloudy line, cuts through the celestial landscape and splits into two paths between Cygnus and Ophiuchus.\textsuperscript{157} The fresco is divided by the principle meridian lines inscribed in gold: the North and South Poles, the Arctic and Antarctic Circles, the Tropics of Cancer and Capricorn, the Autumnal and Vernal Equinoctial Colures, the Summer Solstitial Colure, the celestial equator, and the ecliptic.\textsuperscript{158} The ecliptic is divided into 30° horoscopic segments marked with the zodiacal glyphs, also painted in gold.\textsuperscript{159}

As Deborah Warner points out, images of the constellations must always be positioned in the same manner in order to be read accurately, but the way in which each constellation is portrayed varies greatly throughout the history of celestial cartography.\textsuperscript{160} She identifies three primary styles, the first of which is the so-called Vienna style, exemplified by Dürer’s maps \textit{Imagines Coeli Septentrionales cum duodecim imaginibus zodiaci} and \textit{Imagines Coeli Meridionales} of 1515 [figs. 66, 67]. Here each of the figures is nude, with the exception of Virgo. The Honter style, named after Johann Honter’s woodcuts of 1532, portrays figures in

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Dover Publications, Inc., 1963), 41. The constellation Antinous is now obsolete and is combined with Aquila in modern astronomy.
\textsuperscript{157} Colona and Fioravanti, 11, similarly describe the depiction of the Milky Way at Caprarola. In this example the Milky Way splits at Lyra and reconnects at Ophiuchus. It should be noted that there is a haze of whitish/gray color between this split, making the Milky Way’s path less clear than that painted in the Sala Bologna.
\textsuperscript{158} The ecliptic is an imaginary line representing the yearly path of the Sun. Roughly defined, a colure is the meridian line that passes through the poles and the equinoxes (where the ecliptic crosses the celestial equator). The other meridian lines are projections of the angular distance measured from the celestial equator, known as the circles of declination. Thus, the North Pole marks +90°, the Arctic Circle +66.5°, Tropic of Cancer +23.5°, Tropic of Capricorn -23.5°, Antarctic Circle -66.5°, and the South Pole -90°. For more information see Appendix 4. The meridian lines are painted over the constellations on the ceiling, indicating that they were added last.
\textsuperscript{159} The zodiacal glyph for Virgo is inexplicably missing, but is likely due to the restoration in the 1940s.
\textsuperscript{160} Warner 1971, 337.
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contemporary dress [fig. 68], and the Mercator style, after Gerard Mercator’s globes of the 1550s, contains figures clothed primarily in ancient Roman dress [fig. 69]. She notes that the figures in the Sala Bologna follow none of these styles, especially in the depiction of their “soft, flowing garments.” I believe that Sabatini and his workshop were more influenced by the drapery style of Renaissance and Mannerist artists rather than by previous examples of celestial cartography. Evidence for this comparison is seen especially in the garments’ style and coloring, both of which recall that of Michelangelo and Raphael in the Vatican. Such a lineage of style suggests that Sabatini was less concerned with imitating cartographic precedents and more interested in emulating the great painters of the recent past so as to stylistically tie his own fresco into the larger decorative program of the Vatican Palace.

The Constellations

The figurative and allegorical representation of the constellations in the Sala Bologna derives from classical mythology, and more specifically from the ancient poetry of the Greek Aratus (c. 310 – c. 240 BC) and the Roman Marcus Manilius (fl. first century AD), both of whom are represented in the quadratura below the ceiling. Aratus’ astrological poem *Phaenomena* remained popular into the sixteenth century for its descriptions of the constellations and their mythological origins. Although Manilius’ *Astronomicon libri V* was less ubiquitous, the inclusion of this ancient astrologer and poet within the quadratura demonstrates Gregory XIII’s familiarity with his work, and therefore it follows that it too provided inspiration for the ceiling fresco.

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161 Herlihy, 114, acknowledges Warner’s three categories of style and notes that most Early Modern maps were derived from one of them.

162 Warner 1971, 337.
In the upper left of the sky map is Andromeda. Chained to a rock in sacrifice to the sea-monster Cetus as punishment for her mother Cassiopeia’s hubris, Andromeda is rescued by the demigod Perseus. She is shown as a beautiful young maiden, with a swath of light green drapery covering the lower mid-section of her otherwise nude body. Following the descriptions of both Aratus and Manilius, her arms are spread out wide and held in place by a golden chain attached at the wrists as she awaits her monstrous fate.

Antinous, as mentioned above, does not appear in the poetry of antiquity, but is here shown as a beautiful young man representative of Hadrian’s lover. Located in the lower middle of the map, he reclines slightly and gestures with his right hand toward his neighbor Aquarius. Aquarius in turn looks back to the left, with eyes cast slightly downward. The descriptions of Manilius can be seen in the youthfulness of the waterbearer, as well as the upturned pitcher held in his right arm from which water pours forth. Sabatini and his workshop paint him with light brown hair and a wrapping of red cloth around his mid-section. In Aquarius’ left hand is a golden cup.

Just above Antinous is the brown eagle Aquila, painted completely *di sotto in su* with wings outstretched as Manilius describes. In the very bottom center of the map is Ara. Here a flame of bright orange and yellow rises from a white marble altar. A relief of a floral swag held in place by two rams’ heads is in the center of the marble. The heroic ship Argo sails on the lower left of the canopy. Aratus describes the mist that bathes the ship that can here be seen covering the bow of the vessel. Sabatini and his workshop masterfully realize the effect of water with two oars in front that are immersed in an ephemeral sea of gray and white.

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163 For the following specific references to Aratus and Manilius see Appendix 1.
On the far right of the ceiling is Aries. With tightly curled horns, the ram tucks his front legs under his belly, and, following the descriptions of Manilius, looks to its neighbor Taurus. His golden fleece is realized in the delicate texture of his frescoed fur. Auriga the charioteer kneels on the upper right edge, and with bearded face looks out past the decorative border of the canopy. He is barefoot but fully clothed in pale green and purple. On the opposite side of the fresco is Boötes the herdsman. Holding a metal spear in his right hand, he gestures upward with his left and looks to his right. He wears a tan leather hat adorned with three white feathers, and is fully clothed in drapery of green, blue, and red. The bright star Arcturus is placed between his widespread legs.\textsuperscript{164}

Cancer is painted on the middle right as a brown and reddish crab. Below him are the hunting dogs Canis Major and Canis Minor. The latter is depicted as a small dog with red and white fur, and with front paw raised. Canis Major is also white, but with shorter hair and a red collar around his neck. His two front paws are placed on the golden border of the canopy, and the bright star Sirius, which both Aratus and Manilius describe the rising effects of in great detail, is painted in his face. Near the lower middle is Capricorn, the zodiacal goat that Manilius describes as tightly curled upon itself. He is painted in shades of brown and white, and has an amphibious tale. With both front legs tucked under his abdomen, he looks sternly outward to the center of the ceiling.

Cassiopeia, who was banished by the gods to sit upside down for eternity on account of her pride, is located midway on the upper right. Wearing a golden crown she looks out towards the viewer and holds a golden scepter in her left hand. Seen from the back, she is elegantly dressed in robes of pale pink, green, and gray, and, as Manilius describes, twists around towards her daughter Andromeda. Centaurus, diagonally down and to the left from

\textsuperscript{164} Next to Arcturus is a small golden arrow.
Cassiopeia, is painted with bulging muscles, a stern facial expression, and red cheeks. He is gray in both hair and beard, and wears a green sash tied at his shoulder. In his right hand he holds a shield, and following the poetry of Aratus, he uses his left hand to thrust a wooden spear into the wolf Lupus.

King Cepheus, the father of Andromeda, is painted in the upper middle of the fresco. Like his wife Cassiopeia, he is dressed elegantly in robes of yellow, orange, green, and purple. Fully bearded, he wears a golden crown, and stretches out both arms, as described by Aratus. Cetus, the sea monster to whom his daughter was to be sacrificed, is located on the lower right. Manilius tells of a scaly sea-monster with powerful jaws, and following this, Sabatini and his workshop painted a large green and red fish with bulging yellow eyes and a mouthful of sharp teeth.

Next to Ara in the bottom center is Corona Australis, the southern crown, here shown as a wreath of green leaves tied with a red ribbon. Given that Aratus describes only a ring of stars, and Manilius omits the constellation entirely, the representation of a floral crown is enigmatic in origin. Corona Australis is represented as a traditional crown in Dürer’s woodcut of the southern hemisphere, as well as in other popular contemporary imagery, such as the celestial globe of Mercator (1551) [fig. 69], the gores of François Demongenet (c. 1560) [fig. 70], the gores of Johannes Schöner (c. 1515) [fig. 71], and the woodcuts of Johannes Honter (1532) [fig. 72]. The ceiling at Caprarola, however, features a wreath, suggesting that Sabatini here followed de’Vecchi’s iconographic lead.

Located next to Boötes and representing the memorial of Ariadne is the northern Corona Borealis, painted as a golden crown and dominated by a single star, as described by Manilius. The small black raven Corvus perches upon Hydra on the lower left. Just to the left is Crater, a double-handled silver pitcher with a mask on the front.
In the middle of the fresco, below Cepheus, is Cygnus the swan. With large wings outstretched, Cygnus represents the great white bird that Zeus disguised himself as during his encounter with the maiden Leda. Just below is Delphinus the dolphin, painted here in shades of gray and red. The great dragon Draco coils around at the upper middle of the fresco, between Ursa Major and Minor. Sabatini and his workshop paint the monster in varying shades of red, green, and gray, and with an open mouth revealing sharp teeth. A horn crowns the dragon’s face, and wings spread out from his neck.

With its front legs obscured by a gray cloud, the brown horse Equuleus is located just to the right of Delphinus. Below him and to the far right is the river Eridanus, called the river of tears by Aratus, and represented with varying shades of white and gray. At the opposite end of the fresco on the middle left edge is Gemini. Sabatini and his workshop paint the Twins as pudgy cherubs who embrace each other with one arm and gesture out with the other. The bright stars Castor and Pollux are seen glowing in their two faces.

The great hero Hercules is found in the center, just to the right of Boötes. A muscular man with curly brown hair and beard, Hercules is here painted in the nude. Sabatini and his workshop follow the description of both Aratus and Manilius in positioning the figure on bended knee, and confirm his identity with the skin of the Nemean lion and the wooden club, each held in one hand.

In the lower left corner above Argo and Centaurus is the coiling water snake Hydra, similar in coloring to Draco, but more serpentine in appearance. Above its head is the golden Leo, whose eyes look up to Ursa Major with a furrowed brow. Sabatini and his workshop paint the front legs and underbelly of the lion *di sotto in su*, although the rest of the beast appears in profile. There is great attention to detail in the articulation of his fur, seen especially in the face and mane.
Lepus is shown on the middle right edge of the ceiling as a small, brown and white rabbit. Placed just below the feet of Orion, the hare’s ears are each pointed up and he appears ready to leap. Back towards the middle left are the golden scales of Libra dangling above the encounter between Centaurus and Lupus the wolf. The great wolf himself raises both arms up and snarls with an open mouth back at Centaurus who stabs him with a wooden spear.

Representing the tortoise shell that Orpheus crafted into a lyre is Lyra, found between Hercules and Cygnus in the upper center. The depiction of the lyre in the shape of a tortoise shell is significant, as it differs from all previous iconography, including that seen in Caprarola, Dürer, Mercator, Demongenet, Schöner, and Honter. The tortoise shape in the Sala Bologna demonstrates a close understanding of both Aratus and Manilius, both of whom describe such a shell, and highlights Sabatini’s use of their poetry as allegorical inspiration.

Below Lyra and to the left is Ophiuchus, the great serpent-bearer. Both poets describe a strong man who wrestles with a beastly serpent that coils around and looks back at his attacker. Sabatini and his workshop follow these accounts, and design Ophiuchus as a bearded man with a stern expression, clothed in a long tunic of green and red.

Another hero is found in Orion, painted on the far right edge of the ceiling. The hunter in the Sala Bologna wears armor of pale pink and white, with a metal helmet, leather sandals, and a sheathed sword. Following Manilius, Sabatini and his workshop paint him with both arms raised above his head and holding a shield and metal club. The great stars Betelgeuse and Rigel are painted in the hunter’s right shoulder and left foot respectively.

Below Andromeda on the middle right is Pegasus, whom Perseus rode to rescue the young maiden. The mythical horse has multi-colored wings of yellow, red, and green, and
although the rear of his body is obscured by a painted cloud, his front legs appear in a gallop. Perseus himself is close by, just to the right of Andromeda. Aratus tells of a striding warrior who raises his right arm towards Cassiopeia, and indeed Sabatini and his workshop follow these descriptions. The hero is clothed in gold and purple armor with a red sash and winged sandals. He holds a sword aloft in his right hand and the freshly severed head of the gorgon Medusa in his left.

Pisces appears below Andromeda and Perseus as two green fish connected by a purple ribbon. The southern fish, Pisces Austrinus, is further down and to the left, below Aquarius. Represented as a roundish gray and red fish, Pisces Austrinus drinks the water poured by Aquarius above. Found between Delphinus and Cygnus is Sagitta, a single wooden arrow with a metal head.

Shooting an arrow towards Scorpius is the archer and centaur Sagittarius in the bottom center. With face bent down he wears a red sash that billows out behind and is attached at the shoulder by a golden strap across his back. Scorpius is almost the same size as its attacker, and is painted in shades of black and white, with its tail coiled in a circle. Directly above the scorpion is Serpens, the snake with whom Ophiuchus wrestles.

Manilius tells how Taurus looks towards Orion and Gemini with a lowered gaze. Seen on the middle right, the great bull is white and red in color, and has large horns and outstretched legs. Directly behind is Triangulum, the small golden triangle. The two great bears, Ursa Major and Ursa Minor appear on the opposite side of the fresco, on the upper left. Both are brown in color and look down at all the other figures, as Manilius suggests.

The final constellation painted on the ceiling is Virgo, the young virgin found to the right of Leo. Following the descriptions of both Aratus and Manilius she is represented as a beautiful maiden and wears a white dress with embroidery at the neckline and tied at the
waist with a sash. Her golden hair is braided down her back between two brightly colored wings of red, orange, and green, and she wears a crown of leaves and flowers. In her right hand she holds a small floral wreath, and in her left a bushel of wheat with the bright star Spica.

**Iconographic Differences with Caprarola**

In order to better understand the nature of the iconography in the Sala Bologna, it is useful here to compare it to the ceiling fresco painted in 1574 in the Sala del Mappamondo in the Palazzo Farnese at Caprarola [fig. 56]. Vanosino also plotted the stars of this fresco, and given the iconographic similarities between the two, as well as their proximity in both dating and location, the Caprarola ceiling is often compared to that of the Sala Bologna. It is unclear as to what extent Gregory XIII knew the Farnese fresco as his only recorded visit to the palazzo is in September 1578, three years after the painting of the Sala Bologna. Given Vanosino’s involvement with both commissions, however, it can be assumed that the former influenced the latter, at least in the overall design and orientation of the heavens.

Loren Partridge has maintained that the Caprarola ceiling is the first example of the entire celestial sphere painted in fresco. Moreover, he calls the fresco a map, as does Francesca Fiorani. Upon careful and critical inspection, however, I argue that the Caprarola and Sala Bologna ceilings are quite dissimilar in style, iconography, and arrangement. Important differences between the two frescoes can be found in the representation of almost every constellation, each of which is identified and described in

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165 For comparisons of these two ceilings see Colona and Fioravanti, 5-19; Fiorani 2005, 145-148; Hess 1967, 408; Lippincott 1990A, 206; and Partridge, 420.
167 Partridge, 413-444; Fiorani, 145.
Appendix 1, but the most significant disparity is found in the inclusion of various heraldic symbols at Caprarola. These elements suggest that the overriding theme of the Farnese fresco is personal and horoscopic in nature, while the priority of the Sala Bologna is given to the cartographic accuracy that demonstrates Gregory XIII’s interest in the astronomical sciences.

Partridge has written extensively on the horoscopic iconography of the Sala del Mappamondo, and has described how each element refers to the Farnese family. He argues that the altered direction of the constellation Argo, sailing to the left at Caprarola instead of to the right as it would if seen from an outer-celestial point of view, mirrors that of the same symbol found in Farnese imprese where it represents the family’s victory over Julius III in the fight for the territory of Parma in 1551-1552. He elaborates on this point and explains that the poet Annibale Caro (1507 – 1566) appropriated the ship to represent the family’s safe passage through treacherous mountains, which in turn are a play on the family name of the builder, Julius III del Monte. Finally, Partridge explains the missing clouds on the Caprarola ceiling that should otherwise surround the vessel by suggesting that the Farnese are not a ruined family, nor that their ship is wrecked, nor in danger.

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168 Additionally significant is the total number of constellations at Caprarola, which, based on the depiction of the dogs of Boötes, Colona and Fioravanti, 12, bring to fifty. The authors mistakenly state that the dogs were canonized in the 1687 map of Polish astronomer Johannes Hevelius, but the dogs are first found in the works of both Mercator and François Demongenet, on which see Dekker 1999B, 72.

169 Fiorani 2005, 145-147; and Fiorani, “La Sala Bologna nell’Appartamento di Gregorio XIII,” in Tra Oriente e Occidente: Città e Iconografia dal XV al XIX Secolo, ed. Cesare de Seta (Naples: Electa, 2004), 180-181, notes that Cardinal Alessandro Farnese commissioned the Sala del Mappamondo in anticipation of a papal victory, and given these unfulfilled ambitions, she argues that Gregory’s ceiling is an “ironic response”. In other words she suggests that the Boncompagni pope modeled his own room after that of Cardinal Farnese. I argue instead that despite the visual similarities between the two frescoes the commission of each was born from different goals: horoscopic at Caprarola, cartographic at the Vatican.

170 Partridge, 418-422. The ancient poets, including Aratus (342-351) and Manilius (V.32-39), describe the traditional direction of Argo. Additionally, Hyginus, to whom Partridge ascribes the allegorical inspiration for the Farnese fresco, relays Argo’s proper orientation in the Fabulae (14). For Hyginus see, Mary Grant, The Myths of Hyginus (Lawrence: University of Kansas Press, 1960).
Partridge also mentions the inclusion of the goat Amalthea painted on the shoulders of Auriga.\textsuperscript{171} Referred to by the ancient poets as Capella after the name of its brightest star, the goat is commonly found in examples of celestial iconography, including Dürer, Demongenet, Schöner, and Honter. In fact, the absence of Capella in the Sala Bologna is the exception to the iconographic standard, but can be explained with reference to the fact that Ptolemy does not include the goat in the \textit{Almagest}, and the Sala Bologna adheres more strictly to the ancient astronomer's list. For the inclusion in the Sala del Mappamondo, Partridge argues that it represents a play on the name of the town Caprarola, or goat hill, and is meant to demonstrate the family's patronage within the city.

Additionally, the Farnese ceiling includes several of the family’s emblem, the \textit{fleur de lis}, none of which are found in Ptolemy, the ancient poets, or traditional iconography. As Partridge points out, four lilies form the points of Corona Borealis, six adorn the ship Argo, and a blue lily adorns the altar Ara. For the large \textit{fleur de lis} painted at the position of the South Pole, he argues a further reference to Alessandro Farnese, noting here another play on words.\textsuperscript{173} He suggests that the placement of this lily recalls the Latin \textit{cardo} or \textit{cardine}, from which “cardinal” stems, and that the astronomical definition of a point on which the universe rotates reflects Alessandro Farnese’s power.

Perhaps the most significant difference between the Farnese ceiling and that in the Vatican is the inclusion of Jupiter at Caprarola. The planetary god is seemingly out of place in an otherwise purely stellar composition, and, moreover, given his placement in the upper left corner, both the location and size of the neighboring constellation Ursa Major have been adjusted to compensate for his addition, thereby compromising the cartographic integrity of

\textsuperscript{171} Partridge, 420-422.  
\textsuperscript{172} Aratus (156-166), and Hyginus (II.13).  
\textsuperscript{173} Partridge, 421-422.
Riding an eagle, the god reaches back with his right hand in a motion to throw a cluster of thunderbolts down to the opposite corner of the fresco towards Phaethon, who in turn tumbles from his chariot into the constellation Eridanus. This latter scene, known as The Fall of Phaethon, is also included in the Sala Bologna, although unlike the example at Caprarola, the Phaethon group in the Vatican does not interact with other elements in the ceiling and instead exists independently of the other constellations.

The Fall of Phaethon

The story of Phaethon comes from Ovid’s *Metamorphoses*. Doubtful of his mother’s assertion that Apollo is his true father, Phaethon asks to drive the Sun god’s chariot to prove his paternity, despite warnings that not even Jupiter could manage the horses. During his journey Phaethon steers the chariot too high and loses control, causing the Earth to burn. In order to prevent further destruction, Jupiter throws a thunderbolt and knocks Phaethon from the chariot and into the Eridanus. His sisters cry over his fate, and from this Aratus calls the Eridanus the “river of many tears”.

Given the absence of stars painted in the horses and chariot in the Sala Bologna it is clear that the viewer is not meant to read the Phaethon group as a constellation but instead as auxiliary decoration. In accordance with the Ovidian text, Sabatini paints the scene next to Eridanus but, with the exception of a small overlap of Phaethon’s cloak at the bottom edge of the river, the mythological scene is isolated in the lower right corner of the ceiling.

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174 Compare the size and positioning of Ursa Major at Caprarola with that in the Sala Bologna. The Farnese bear is closer in size to its partner Ursa Minor when compared to the dramatically different-sized bears at the Vatican. Additionally, the nose and front paws of the Farnese bear begin at the rear of the constellation Leo below, while its tail ends at Virgo’s midsection. Comparatively, the Sala Bologna bear begins in front of Leo and its tail reaches out to Virgo’s knees.


176 Aratus, 359.
Four white horses are painted to the left of the chariot, three of whom kneel down and rest on a cloud of white and gray while the forth rears up and looks back towards his master. Phaethon himself is depicted as a nude male youth enveloped in red drapery and falling upside down from a golden chariot. His right foot remains on the chariot floor while his left leg stretches out. He gestures towards the right with both arms and looks to the left with an anxious expression.

A drawing of The Fall of Phaethon now in the Boston Museum of Fine Arts is nearly identical in both style and composition to the Sala Bologna scene [fig. 73]. Although traditionally attributed to Giulio Romano, David McTavish suggests instead that the sketch recalls the work of Pellegrino Tibaldi, specifically the ceiling of the same scene in the Palazzo Poggi in Bologna painted between 1554-1555 [fig. 74]. The fresco in question exists today in ruinous condition with only a fraction of the chariot’s horses remaining, but McTavish convincingly bases his argument on an engraving of the ceiling published in G. Zanotti’s 1756 Le Piture di Pellegrino Tibaldi e di Niccolò Abbati esistenti nell’Instituto di Bologna [fig. 75].

Given the compositional similarities between the Boston drawing and the Vatican fresco, McTavish builds on his argument to suggest that Vanosino may have had access to the sketch and as a result used it to bring the Phaethon scene from Bologna to Rome. It may indeed have been Vanosino who proposed the idea of including The Fall of Phaethon in the Sala Bologna, but the proposal would have instead been as a result of his work at Caprarola a year earlier. Moreover, although I agree with McTavish that the Vatican composition is a copy of Pellegrino’s sketch, it is Sabatini, the artist who actually frescoed

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178 Fiorani 2005, 302, n. 7, disagrees with McTavish, and proposes that the author of the drawing is Mascherino, who she says may have helped Sabatini paint the scene in the Sala Bologna.
the scene, who must have had access to the Boston drawing. It follows then that although the decision to include The Fall of Phaethon in the Sala Bologna was undoubtedly inspired by the scene in the Farnese fresco, the dramatic differences in style and composition between the two suggest that each was based on a different source.\footnote{The most dramatic differences between the two frescoes can be seen in the positioning of the horses and the figure of Phaethon. In the Sala Bologna, the four horses are placed tightly together atop a single cloud while Phaethon falls below the river Eridanus and is still partially connected to his chariot. In contrast, there is no cloud at Caprarola, and the horses are spread further apart and face different directions. Phaethon here falls horizontally into the Eridanus, and is painted on top of the river, completely removed from the seat of his chariot.} Whereas it has been argued that the Caprarola scene resembles the sketches of Michelangelo [fig. 76],\footnote{Mary Quinlan-McGrath, “Caprarola’s Sala della Cosmografia,” \textit{Renaissance Quarterly} 50 (1997): 1056, 1066; and Marcella Marongiu, \textit{Currus Auriga Paterni Fetonte nel Rinascimento: Modelli Antichi e Fortuna del Mito nell’Arte dei Secoli X - XI -XII} (Lugano: Agorà Publishing, 2008), 130.} Sabatini instead looked to Bologna, the hometown of his patron, for inspiration.

Marcella Marongiu, who has published on the Phaethon theme in Renaissance painting, discusses the scene as a traditional allegorical warning against hubris.\footnote{Marongiu, 187, n. 6. See also Dorothea and Peter Diemer, “‘Der was nit kan und nimpt sichs an/Der muss den spott zum schaden han.’ Der Mythos von Phaethon im Hirschvogelsaal,” in \textit{Der Hirschwogelsaal in Nürnberg: Geschichte und Wiederherstellung} (Munich: Bayerisches Landesamt für Denkmalpflege, 2004), 112; and Erwin Panofsky, \textit{Studies in Iconology: Humanistic Themes in the Art of the Renaissance} (Oxford: Oxford University Press, 1939), 219.} In addition, Dorothea and Peter Diemer note how the subject is most commonly portrayed as an individual scene, as in Sodoma’s \textit{The Fall of Phaethon} of 1505-1507 [fig. 77], or as an addition to a more complex mythological or allegorical cycle, as seen in a lunette by Sebastiano del Piombo from 1511 in the Sala di Galatea, Villa Farnesina, Rome [fig. 78].\footnote{Diemer, 109.} Given the fact that Ovid’s story takes place in the heavens, The Fall of Phaethon is a popular subject for ceiling frescoes, as we have already seen at the Palazzo Poggi.\footnote{Other examples include an octagon in the Camera delle Aquile, Palazzo del Te, Mantua, painted 1527-1528 by Giulio Romano; the ceiling in the Loggia del Cortile dei Leoni, Magno Palazzo, Castello del Bonconsiglio, Trent, painted 1531-1532 by Romanino; and the ceiling in the Sala dei Giganti, Rocca dei Rossi, San Secondo, painted 1557-1563 by Orazio Samacchini. For a complete listing see the catalog in Marongiu.} The representation of Phaethon surrounded by all of the constellations, however, is unusual and therefore begs the question as to the reasoning behind its inclusion.
Achenar, the bright star found at the bottom of the constellation Eridanus, was personified in the sixteenth century in the gores of François Demongenet as a youthful maiden in 1552 and a nude male in 1560.\textsuperscript{185} The 1560 Demongenet gores were the likely cartographic source for both the Caprarola and Vatican frescoes, and so the idea to personify the star must have stemmed from there. Moreover, as Jacob Hess has observed, a figure was also painted at the bottom of the Eridanus on the Altemps globe with the accompanying inscription FAETONTE [fig. 79].\textsuperscript{186} We have already proposed that Vanosino was not the painter of the Altemps globe, but given his tenure at the Vatican before the commission at Caprarola, he was undoubtedly familiar with it. Combining this iconography with what he saw in the Demongenet gores, Vanosino may have suggested including The Fall of Phaethon to de’ Vecchi and the other artists in the Sala del Mappamondo, who in turn expanded the idea and transformed a single figure into a full allegorical scene.

On a basic level, The Fall of Phaethon at both Caprarola and the Vatican is a suitable allegory to fill the space on the bottom right of each ceiling: the subject connects thematically to the constellation Eridanus and provides visual balance to the rest of the ceiling covered with Ptolemy’s constellations. But Phaethon’s fall has additional meaning when considered within the larger context of each room. For Caprarola, we turn back to Jupiter painted in the upper left corner.

As mentioned above, de’ Vecchi painted Jupiter in the act of throwing a handful of thunderbolts down towards the lower right corner and knocking Phaethon from his chariot. Several scholars have proposed a relationship between the god and the prideful youth as

\textsuperscript{185} Warner 1971, 337. See also Herlihy, 111. Achenar is highlighted in each ceiling: at Caprarola the star appears on Phaethon’s left hip, while at the Vatican it shines directly below his belly button.

\textsuperscript{186} Hess 1967, 407. See also Warner 1971, 337; and Marongiu, 130.
seen here, but Partridge and Mary Quinlan-McGrath are most convincing. Partridge suggests that the drama unfolding between the two figures should be interpreted as an allegory of the suppression of heresy, in this case, the battles against German Lutherans in the 1540s in which Alessandro Farnese aided Charles V. In this sense then, Jupiter stands in for Alessandro himself, and Phaethon, along with his erroneous pride, represents the Lutherans who, if not for the intervention of the cardinal, would have caused destruction throughout the land.

Quinlan-McGrath adds to this argument, noting that as a planet Jupiter holds a significant position within Alessandro’s horoscope, and therefore provides an additional reason for the god’s inclusion. Moreover, she notes that Annibal Caro used the planetary god to symbolize the cardinal’s power, and indeed other representations of Jupiter can be found throughout the villa. Similarly, The Fall of Phaethon highlights the star Achenar, which also held a prominent position in Alessandro’s horoscope.

Such a personal interpretation of Jupiter and Phaethon at Caprarola fits seamlessly with the other horoscopic emblems included on the ceiling, but no such elements exist in the Sala Bologna. There can be no doubt that the decision to include The Fall of Phaethon in

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187 For example, Hess 1967, 408, suggests that the interaction between the two figures represents the discovery of a plot by Ottavio Farnese to oppose his father Ranuccio. This interpretation, however, as Hess himself notes, would give a much later dating to the fresco, and seems less plausible. Given the alteration of Ursa Major, it is unlikely that Jupiter was added later, but instead was planned as part of the original composition. Lippincott 1990A, 197-199, mentions the improbability of Hess’ argument and suggests instead that the inclusion of Jupiter is instead a reference to Aratus’ Phaenomena, and more specifically the Latin editions by Germanicus that often included a image of Zeus similar in composition to that on the Farnese ceiling. She continues on, noting how Aratus begins his poem with a dedication to Zeus and his control of the heavens, which she argues is transferred to Alessandro Farnese via the symbolic addition of the planetary god on the ceiling.

188 Partridge, 422. See also Quinlan-McGrath 1997, 1061. Partridge, 423, argues that the hunting dogs of Boötes are included in the Farnese fresco to provide a visual connection along the diagonal orientation of Jupiter and Phaethon. It seems much more likely, however, that de’ Vecchi painted the dogs to fill in the empty space created from the adjustment in size and position of Ursa Major.

189 Quinlan-McGrath 1997, 1057.

190 Quinlan-McGrath 1997, 1061-1062.

191 Quinlan-McGrath 1997, 1066.
the Vatican was based on the example found in the Sala del Mappamondo, but the removal of Jupiter is significant, and shows that Gregory’s artists did not simply copy what they saw, but instead reinterpreted the scene to fit within the larger theme of the Boncompagni pope’s room. The absence of Jupiter changes the allegorical implication of Phaethon’s fall, since the scene now exists independently. Without the planetary god, the scene should be interpreted once again as a cautionary warning against hubris, something any pontiff might incorporate as a personal motto, but which corresponds specifically to the other emblematic inscriptions in the upper four corners of the room.  

Moreover, without the planetary god, Ursa Major retains her proper size and position, and thus the Vatican ceiling remains cartographically intact. In this sense, The Fall of Phaethon adds embellishment to the fresco but does not detract from the goal of strict Ptolemaic accuracy. Such ornamentation is not unusual within frescoed map cycles, and in fact many of Gregory’s own terrestrial maps include extraneous decoration, such as the two sea monsters found in the lower left corner of the western hemisphere in the Terza Loggia [fig. 80], or the large sea monster painted on the lower right of the map of Sardinia in the Galleria delle Carte Geografiche [fig. 81]. Each of these elements adds beauty and interest, but does not otherwise alter the map.

**Draco**

As the above comparisons have demonstrated, the heraldic additions at Caprarola give the fresco horoscopic meaning. By contrast, the Sala Bologna is more strictly cartographic and follows instead a more precise Ptolemaic universe. There is one constellation in the Sala Bologna, however, whose iconography suggests an allusion to the

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192 See Chapter 1.
Boncompagni *imprese*, that of Draco the dragon. The Boncompagni use of the dragon stems from their claim of heritage from the Dragoni family, who themselves were heirs of the Dukes of Saxony. The family changed names upon their arrival in Bologna, but kept the draconic heraldry. When Ugo Boncompagni was elected to the papacy, his natural son Giacomo sought to erase the negative connotations of such a monstrous family symbol, and, with the help of various scholars within the papal court, held a competition to re-contextualize the dragon in a more positive light. From this event numerous drawings emerged, including Bartolomeo Passerotti’s *Study for a Dragon’s Head* [fig. 82], which shows a dragon with long and pointed ears, deep set eyes and furrowed brow, an open mouth with sharp teeth and protruding tongue, a horn on its nose, and tufts of fur on its chin and neck. As a product of this competition, the Boncompagni dragon evolved into a beast with Passerotti’s attributes, as well as a puffed-out chest and pointed wings, all of which can be seen in ubiquitous examples, including the coats of arms in the Cappella Gregoriana [fig. 83], the Galleria delle Carte Geografiche [fig. 84], and the floor of the Sala Bologna itself [fig. 45].

All of the above listed characteristics are found in the Sala Bologna Draco [fig. 85], but are absent in other representations of the same constellation, including Caprarola [fig. 86], and Dürer’s example [fig. 87], both of which show a wingless dragon that is more serpentine in appearance. This adjustment in physiognomy must be seen as a conscious

reference to the Boncompagni *imprese*, but it is critical to note that these modifications do not hinder the cartographic accuracy of the constellation or the celestial map as a whole, the same of which cannot be said about the altered iconography at Caprarola.

**Vanosino’s Cartographic Source**

We have now seen how Aratus and Manilius provided the allegorical foundation for the artists of the Sala Bologna ceiling, but, given the astronomical errors within the work of each poet, they cannot have been the cartographic source Vanosino used in his plotting of the constellations. Instead, his starting point was Ptolemy’s *Almagest*, not only for the number and identification of the constellations, but also for the listing of the stars within each, as well as their positions and varying magnitudes. Nonetheless, in spite of its thoroughness, the *Almagest* is a text, and given the ceiling’s remarkable accuracy, Hess suggests that Vanosino may also have copied a pre-made map by a master of astronomy or studied previous examples of celestial cartography such as Dürer’s map of 1515.\(^{196}\) Indeed a comparison between the constellations of the Sala Bologna and Dürer’s map shows that the positioning of the stars within each constellation is remarkably similar (see Appendix 1).\(^{197}\) Warner elaborates on this point and convincingly argues that the celestial globes of the French mapmaker François Demongenet (d. 1592) were Vanosino’s primary cartographic source [fig. 70].\(^{198}\) Working in Vesoul, Demongenet published his first woodcut

\(^{196}\) Hess 1967, 406.

\(^{197}\) Deborah Warner states that there are several errors in Dürer’s map but does not specify them. See “Star Charts: Their Lore and Meaning,” in *Celestial Images: Antiquarian Astronomical Charts and Maps from the Mendillo Collection* (Boston: Boston University Art Gallery, 2005), 18. Given the many iconographic similarities, it is possible that Dürer’s map served as a visual source for the ceiling at Caprarola, but the same cannot be said for the Sala Bologna. See Appendix 1 for a comparison between the three.

\(^{198}\) Warner 1971, 336. Subsequent scholars have followed suit, including Colona and Fioravanti, 13; Fiorani 2005, 302, n. 7; Herlihy, 111; and Partridge, 420.
gores in 1552, but it was his copper engravings of about 1560 that became ubiquitous. Moreover, Partridge notes that these were copied and known in Rome via the cartographer Claudio Ducheto (d. 1585). What makes Demongenot such a likely candidate is the fact that his gores were the only examples to illustrate the same unique number of forty-nine constellations found in the Vatican: the Ptolemaic forty-eight plus Antinous.

It seems that Vanosino also looked to the first printed celestial atlas, that of Sienese humanist and philosopher Alessandro Piccolomini (1508 – 1579), published in 1540. The atlas, entitled De le Stelle Fisse, was part of his larger astronomical work, De la Sfera del Mondo, and the two were often published together. Written in the Italian vernacular and therefore accessible to a wider audience, Piccolomini’s text was celebrated for its accuracy and was widely popular, as evidenced by the thirteen editions printed between its inception and the seventeenth century.

The work begins with a catalog listing the forty-eight Ptolemaic constellations (Antinous is not included), followed by images of the constellations themselves. Unlike a celestial globe or map, Piccolomini’s text does not conceive of the constellations as figurative allegories, but instead depicts only the stars. At the bottom of each page is a scale in linear degrees, making the calculation of the angular measure between each star apparent.

Moreover, Piccolomini uses four different types of stars in his illustrations, each of which conveys a differing magnitude and follows the listing of Ptolemy’s Almagest.

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199 Dekker 1999B, 69.
200 Partridge, 420.
201 As stated above, both Vopel and Mercator included Antinous, but they also included the new constellation Coma Berenices, bringing their total to fifty. Additionally, Demongenot shows Antinous from the back, as a nude youth reclining. By contrast, Vopel and Mercator show him from the front. See Dekker 1999B, 71.
202 The full title is de le stelle fisse: libro uno; dove di tutte le XLVIII imagini celesti minutissimamente si tratta; e non solo le favole loro ordinatamente si narra, ma ancora le figure di ciascheduna n’apparono così manifeste, e distintamente disposte, e formate, come a punto per il Ciel si distendono; ed oltre a questo ci son tavole, con nuova invention fabricate, con le lor dichiarazioni, così facili & chiare, che per il mezo di quelle & de le figure insiememente, potravia scendere, con maravigliosa aggevolezza, in ogni tempo de l’anno, a quaì si sia hora di notte, conoscere non solo le dette imagini nel Cielo, ma qual si voglia stella di quelle.
Given the arrangement of the atlas, with each constellation depicted on a separate page, there is room for each star to be presented clearly and accurately, thus making an attractive case for Vanosino’s use of the work as a source for his own design. Additionally, Gregory XIII was a patron of Piccolomini, and the humanist moved within the papal court, and in 1574 the Boncompagni pope appointed Piccolomini as the coadjutor to the Archbishop of Siena. More importantly, Piccolomini was on the later calendar reform committee, demonstrating that Gregory XIII trusted and valued his astronomical expertise. Thus it follows that his atlas, which was in the pope’s hands, could well have been used as a cartographic reference for the Sala Bologna.

Finally, Vanosino certainly adhered to the preparation for his own work at Caprarola, although the differences between the two ceilings demonstrate that the same cartoon was not reused, and that the stars and constellations were plotted more carefully at the Vatican. For example, the Farnese alterations of Argo and Ursa Major, which not only adjusts the allegorical form of the constellation but the positioning of the stars themselves, are not found in the Vatican. Moreover, compared to the Sala Bologna, both Cepheus and Cassiopeia are skewed in their positioning on the Farnese ceiling so that they fit within the more narrow ovoid composition [figs. 1, 56].

**Cartographic Accuracy**

Commenting on Giacomo Barozzi da Vignola’s 1583 perspectival treatise *Le due regole della prospettiva practica*, Egnazio Danti makes note of the Sala Bologna ceiling and observes that “…it is impossible to reduce the eighth celestial sphere with its images onto a flat

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204 Kanas, 71.

205 The Vatican library owns an original 1540 edition of Piccolomini as well as a copy from 1548.
In other words, since any projection of a three-dimensional sky onto a two-dimensional plane will include some necessary distortion, a celestial map would have to be rendered in three dimensions to be completely measurable. Colona and Fioravanti comment on Vanosino’s pseudocylindrical projection method, used in both the Sala del Mappamondo and the Sala Bologna, and note that to be absolutely precise, the constellation Ursa Minor would have to stretch across the entire length of the northern pole. Indeed, to eliminate any distortion, two-dimensional maps must be plotted with a stereographic projection, in which the globe is divided into two hemispheres, as seen with Dürer’s print, or divided into gores, as used by Demongenet [fig. 88]. The projection methods used by Dürer and Demongenet, however, may create an image that is useful for navigation but which is also difficult to read as an entire unit. Such a projection was therefore inappropriate for the Sala Bologna, where decoration was the first priority, as Danti himself notes.

In spite of the slight distortions caused by the pseudocylindrical projection, the constellations at the Vatican are, for the first time in fresco, each correctly proportioned and positioned in relation to one another. Although the Sala del Mappamondo was painted a year earlier, the skewed positioning of Argo, Ursa Major, Cassiopeia, and Cepheus disqualifies this ceiling from being the first cartographically accurate celestial fresco as their locations do not correspond to their placement in the sky.

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206 “…è impossibile di ridurre l’ottava sfera del Cielo con le sue imagini in una figura piana ovale.” Danti, 90. He continues on, stating how this inaccuracy is of no importance, as this fresco is decorative and not meant for navigation. For Danti’s full commentary on the Sala Bologna see Appendix 3B.


208 Danti, 90.

209 This precision can be confirmed with modern planetarium software that allows the user to enter a date and location to create a chart of the sky as seen at the time, in this case, Rome 1575. My thanks to Darrelyn Gunzburg for her help with this. Hess 1967, 409, working with astronomer Author Beer, wrote on the minor imprecisions found in the Sala Bologna, including the tilt of Libra’s scales, and the altered location of Corvus and Crater, and how these were of no consequence to the overall accuracy of the map.
Indeed, other details more closely align the Sala Bologna ceiling with the work of Ptolemy, Dürer, and Piccolomini than with the fresco at Caprarola. Although the background stars appear to be placed randomly, those within the constellations are accurately plotted when compared to Ptolemy’s star catalog in the *Almagest*. For example, the bright star Capella is painted on Auriga’s left shoulder; Arcturus between the legs of Boötes; Sirius within the face of Canis Major; Castor and Pollux in the faces of the Gemini twins; Regulus in the heart of Leo; Algol in the head of Medusa carried by Perseus; and Spica within the wheat held by Virgo.²¹⁰

Adding further to the overall precision of the Sala Bologna ceiling is the different size and shape of the painted stars that reflect their varying magnitudes, or degrees of brightness, as also seen in the models of Ptolemy, Dürer, and Piccolomini. In his star catalogue, Ptolemy describes six different levels of magnitude, as seen for example in the fourth column for the constellation Virgo [fig. 89]. Dürer, meanwhile, cut three differently shaped stars to signify varying magnitudes, all of which can be seen in Orion [fig. 90].²¹¹ The bright stars Betelgeuse and Rigel, located in the right shoulder and left foot of the hunter, are here shown as open six-point stars. Comparatively, the stars along Orion’s belt are depicted as six-point solid stars, and the remaining stars are open circles.

On folio 83r of his celestial atlas, Piccolomini includes a chart to demonstrate how he illustrates four levels of magnitude [fig. 91]. The most brilliant stars are shown open, with eight points, while the second brightest are smaller and half closed. A six-point closed star indicates a level 3 magnitude, while a smaller version of the same is used for the faintest level of brightness depicted in the atlas. Such a variety of size and shape makes Piccolomini’s

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²¹⁰ See also the location of the stars Betelgeuse and Rigel in Orion, as noted in the description of the constellation above. Hess 1967, 409, noted that the bright stars seen in the Sala Bologna follow Ptolemy. Remarkably, the star Spica is absent in the Caprarola ceiling.

²¹¹ Kanas, 71, erroneously criticizes Dürer’s map for lacking stellar magnitude.
stars easy to read, and an example of all four magnitudes can be found in his illustration of the constellation Orion [fig. 92].

In the ceiling of the Sala del Mappamondo, Vanosino divided his stars into three levels of magnitude. The brightest stars here are large with six points, followed by smaller stars of the same shape. His faintest stars have five points. Given the similarity between each star, two of which are separated only by a slight variant in size, the depicted magnitudes at Caprarola are difficult to read. In contrast to this is Vanosino’s later design in the Sala Bologna, in which four different stars are presented:

![Stellar magnitudes in the Sala Bologna]

Magnitude 1 stars are the largest in size, and have eleven points. Next in line are eight-point stars that are slightly smaller, followed by medium-sized stars with six points, and lastly by the faintest stars with only five points. Given that each magnitude is distinct in its shape, the degrees of brightness on this ceiling are clearly seen and easily understood. Such a development in Vanosino’s work suggests that Gregory XIII desired a greater emphasis on accuracy than what had been done previously at Caprarola. Again, the use of Piccolomini’s atlas, in which four levels of magnitude are also indicated, provided a useful source for Vanosino in the Vatican.
The Canopy

The final element of decoration on the ceiling of the Sala Bologna is the fictive canopy on which the map of the heavens is portrayed [fig. 1]. Directly above the quadratura is a painted entablature that opens up to a pale blue sky. Four putti, one in each corner, sit above and hold a stretched canvas of deep red and blue fabric. The map of the heavens fills most of this canopy and is surrounded by a decorative border.

Karl Lehman remains the authoritative source on painted ceiling canopies, tracing the iconography's origins to the early fifth-century BC Etruscan Tomb of the Monkey [fig. 93]. Here, a depiction of the heavens is spread upon a circular canvas held in place by a single Siren in each corner of the ceiling. Lehman considers various forms of celestial iconography, and argues that the display of heaven held in place by four corner figures was the standard formula used in ancient ceiling frescoes. He also notes that although there are few extant examples, the descriptions of ancient authors provide evidence of their ubiquity.

Based on the ancient origins of painted canopies, it follows that Gregory's ceiling was intended as a reference to antiquity, specifically to the age of the earliest astronomers, astrologers, and poets painted in the quadratura below. Moreover, the rich blue and red colors of the canvas recall the coloring of the ceiling in the Sala della volta dorata in Nero's

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213 Lehman 2, 4, 5, 8. See also his figs. 5 and 8. For Cassius Dio’s descriptions of the painted ceiling in the Imperial Palace on the Palatine Hill, to which Lehman refers see Chapter 4. Examples of the contemporary use of fictive canopies, without a celestial context, can be seen elsewhere in Rome, including the ceiling of the Sala di Psyche in the Villa Chigi (now Farnesina), painted by Raphael and his workshop in 1517-1518, as well as the Battle of the Ponte Milvio in the Sala di Costantino in the Vatican, designed by Raphael and painted by his workshop in 1520-1524. Nicola Courtright discusses the use of tapestries in the Sala di Costantino and their connection to the use of wall hangings in Constantinople. See Courtright, The Papacy and the Art of Reform in Sixteenth-Century Rome: Gregory XIII’s Tower of the Winds in the Vatican (Cambridge: Cambridge University Press, 2003), 100-101.
Domus Aurea, as reconstructed by the painter Francisco de Hollanda in 1538 [fig. 94].

But there is more to be said for the display of the heavens on a canopy, especially when seen in contrast to the painted clouds on the outer edges of the Caprarola fresco that suggest a realistic vision of the night sky as if seen through an opening in the ceiling [fig. 56].

The compositional use of a canopy emphasizes the apparent flatness and map-like quality of the Sala Bologna ceiling, especially when considered in conjunction with the fictive loggia below. This flatness must be considered a conscious choice, as the quadratura demonstrates that illusionistic perspective was not only possible, but was successfully employed elsewhere in the room. Here, in the quadratura, daylight illuminates each niche and pergola, as well as the four corners of the ceiling between the putti and convex edges of the canopy. The manifestation of night, evidenced by a darker shading of blue, as well as by the appearance of the stars themselves, establishes that the celestial scene was made to look as if it were painted on a two-dimensional surface, and it is therefore more closely related to a printed map than a miraculous vision. This conceptual break between daylight in the quadratura and the representation of night on the canopy demonstrates that the two ideas were meant to be read separately. The loggia exists as a fictive continuation of the room’s architecture, while the constellations are depicted on a flat surface that is disconnected from this illusion and instead held above it. The putti holding the canopy in each corner reinforce the notion that the stars are plotted on a map and are not actually filling the sky above.

Given the outer-celestial point of view found in both the Sala del Mappamondo and the Sala Bologna, the ceiling at Caprarola, seen as if open directly to the heavens, contradicts the orientation of the constellations. If one were truly looking up into the sky from the room below, the vision of heaven as seen in the fresco would not match how the sky is

For this watercolor see Roberto Luciani, and Leandro Sperduti, Domus Aurea Neronis Roma (Rome: Istituto Poligrafico e Zecca dello Stato, 1993), 77-78.
actually viewed from Earth. With the inclusion of a canopy in the Vatican this potentially confusing outer-celestial orientation is made irrelevant, as the viewer is visually guided to believe that the constellations are displayed above them but are not actually existing in the sky above the *quadratura*.

Samuel Edgerton Jr., in his examination of Alain Manesson Mallet’s astronomical prints of 1683 [fig. 95], offers another explanation for the use of drapery in a similar context.\(^{215}\) He argues that even at the end of the seventeenth century, changing notions of the universe remained difficult to comprehend, and thus one way to contextualize these events was to depict them on hanging draperies to provide a visual context familiar to the viewer. In the case of the Sala Bologna, the use of a canopy, as well as retaining the allegorical forms of the constellations themselves, provides a recognizable visual reference for viewers who may otherwise be unfamiliar with such a precise demonstration of celestial cartography.

**Part III: History and Mythology of the Celestial Sciences: The *Quadratura* Figures**

The ten figures seated in the painted loggia—nine male and one female—have never before been thoroughly examined.\(^{216}\) Each figure is placed between the paired columns and identified by name in the center of the arch above. On the north side, the Old Testament figure Seth (identified in the inscription as FILII SETH) sits next to the Egyptian god Thoth

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\(^{216}\) This section expands upon my scheda “*Quadratura con figure nell'intradosso della volta della Sala Bologna, 1575*”, 154-161) in the recently published *La Sala Bologna nei Palazzi Vaticani*. Taja calls these figures “various symbolic figures” and Chattard labels them “writers of astrology and geography.” See A.M. Taja, *Descrizione del Palazzo Apostolico Vaticano* (Rome, 1750), 497; and Gio. Pietro Chattard, *Nuova descrizione del Vaticano o sia della sacrosanta Basilica di S. Pietro*, vol. 2 (Rome, 1766), 370.
Above the east wall, the Egyptian goddess Isis is centered between the mythical Titan Atlas and the Greek philosopher Thales. On the south side, Anaximenes, another Greek philosopher, is painted next to the Greek astronomer and poet Aratus. On the east side sits the ancient astronomer and geographer Ptolemy (identified in the inscription as PTOLOMÆ), the Roman poet Marcus Manilius (identified in the inscription as MANILIVS ROM), and Alfonso X (identified in the inscription as ALPHONSVS REX), a medieval Castilian king and astrologer.

Uomini Famosi

Before discussing the figures themselves it is useful to briefly consider the tradition and depiction of Uomini Famosi, as the program in the Sala Bologna stems from this practice. Depictions of the Seven Sages and other famous men date back to antiquity and this visual theme was revived in the Renaissance. Although we now have evidence of examples in mosaic and statuary, those in the Renaissance knew about this artistic tradition through the descriptions of ancient authors. For example, in the Histories (c. 450 – 420

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217 To avoid confusion, I will follow the inscription in the Sala Bologna and refer to this Egyptian god by the name of Theut.


BC), Herodotus describes the various cycles he observed on his travels,\textsuperscript{220} and Cicero comments on the usefulness of groupings of famous Roman Republicans in his \textit{Oration Against Verres} of 70 BC.\textsuperscript{221} Perhaps the richest source is Pliny’s \textit{Natural History}, written about 77 – 79 AD, in which he notes various examples as well as the types of men portrayed. Particularly useful within a discussion of the Sala Bologna is Pliny’s list of artists who sculpted busts of famous philosophers.\textsuperscript{222}

Plutarch’s \textit{Parallel Lives} of the late first century AD and Suetonius’ 121 AD \textit{Twelve Caesars} demonstrate the literary tradition of \textit{Uomini Famosi} in antiquity, and these texts inspired the later Renaissance compendia of Petrarch (\textit{De Viris Illustribus}, begun c. 1337) and Boccaccio (\textit{De Casibus Virorum Illustrium}, c. 1360).\textsuperscript{223} As Christiane Joost-Gaugier has noted, the Early Modern tradition of the depictions of famous men began with the literature of Petrarch and Boccaccio and later evolved into pictorial representations.\textsuperscript{224} Such Renaissance cycles were painted within audience halls, meeting rooms, and other public spaces so that their propagandistic message would reach a wide viewership. Although the iconography of surviving examples varies greatly, the most common selection of figures included those from the Old Testament, antiquity, and the recent past.\textsuperscript{225} Exactly who was included, and how they were shown, was dependent on the message that the patron wished to convey. For example, contemporary figures, such as those found within Andrea del Castagno’s 1448

\textsuperscript{220} For example, the historian tells of the Egyptian king Sesostris’ statues of himself and his family. See Herodotus, \textit{The Histories}, trans. Robin Waterfield (Oxford: Oxford University Press, 1998), II.110.1-3.
\textsuperscript{223} In Canto IV of the \textit{Inferno}, Dante also provides a list of \textit{Uomini Famosi} when he recites the virtuous pagans he meets in Limbo, including Thales and Ptolemy. See Dante, \textit{The Inferno}, trans. Robert Hollander and Jean Hollander (New York: Doubleday/Anchor, 2000), IV.134-144.
\textsuperscript{224} On which see Joost-Gaugier 1985, 58. The first pictorial example is thought to be that by Giotto for King Robert of Anjou in Naples, which is no longer extant.
\textsuperscript{225} See Joost-Gaugier 1983, 8. The selection of figures in the Sala Bologna matches this last grouping.
fresco cycle from the Villa Carducci in Legnaia and now reassembled in the Uffizi in Florence, served as a demonstration of civic pride [fig. 96]. Heroes of the ancient world were used to link a patron with the glorious past, and familial history was often represented through knights, kings, and queens. Despite the wide array of variations, each series contained an underlying message of virtue and conduct that was meant to inspire both the patron and the viewer in similar behavior.226

The figures in the Sala Bologna include examples from the Old Testament, classical antiquity, and the medieval past who together represent a unified theme of natural philosophy, including astrology and astronomy. Petrarch’s *Triumph of Fame* promotes the value of such men and offers a possible literary inspiration for the cycle. In Book III he describes the superior character of those who gain fame by means of intellect rather than arms, and he includes a listing of ancient philosophers, scientists, statesmen, rhetoricians, and historians.227

In the beginning of the sixteenth century, Raphael was the first to bring the theme of noble philosophers to fresco in the Palazzo Vaticano with his *School of Athens* for Julius II (1508-1511) [fig. 97].228 As Daniel Bell notes, there were no artistic precedents available for the artist to draw upon, and although the ancient histories provided details on the lives and deeds of each philosopher, there was little included in regards to physical appearance.229 Raphael therefore had to create a new iconographic schema, and, with the depiction of classical dress and advanced age, the majority of figures in the *School of Athens* embody this

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226 See Joost-Gaugier 1983, 7; and 1985, 57.
227 Petrarch, “Triumph of Fame,” in *The Sonnets, Triumphs, and Other Poems of Petrarch*, ed. and trans. Thomas Campbell (London: Henry G. Bohn, 1859), III.1-12. Although Petrarch does not mention any of the figures included in the Sala Bologna, it is his underlying theme of the merit of ancient philosophers that is worth noting.
228 There are certainly pictorial representations of individual philosophers and astronomers that predate Raphael, but these exist outside of thematic groupings. For example, see Andrea Pisano’s c. 1336 marble relief of an astrologer on the Campanile in Florence.
general “philosopher type.” The philosophers in the Biblioteca Marciana [fig. 98], painted between 1561-1572 by Veronese, Tintoretto, and others, follow Raphael’s paradigm, and it is from this pictorial tradition that Sabatini developed the iconography for his own series in the Sala Bologna.\footnote{There is also a painted cycle of philosophers that appear in the lunettes on the upper walls of a small room in the cloisters of Sant’Abbondio in Cremona, dating to c. 1513. These figures vary greatly in style from those found in the Biblioteca Marciana and in the Sala Bologna. For this cycle see Marika Leino and Charles Burnett, “Myth and Astronomy in the Frescoes at Sant’Abbondio in Cremona,” Journal of the Warburg and Courtauld Institutes 66 (2003): 273-288.}

In the Sala Bologna the dedicatory inscription to Gregory XIII begins above the representation of Seth and thus offers a likely sequence of intended reading of the figures. After the mythological figures of Theut, Atlas, and Isis, the remaining historical figures appear in chronological sequence with the exception of Ptolemy and Manilius; despite Ptolemy’s later dating, he is placed next to his fellow Greeks.

Identity of the Figures

**FILII SETH, Biblical founder of astrology/astronomy**

Situated in the corner of the north wall sits Seth, the third son of Adam and Eve as relayed in the Book of Genesis [fig. 99].\footnote{Genesis 4:25. Unless otherwise noted I use the New International Version of the Bible. Genesis 5:3 tells that Seth was born when Adam was 130 years old, and that he was born in his father’s image. He lived a total of 912 years, fathering many children, including his firstborn son Enos, alternatively spelled Enosh (Genesis 5:6-8). Seth is also mentioned in the lineages of Christ in Luke 3:38, as the father of Enos and son of Adam.} In addition to biblical references, most of our knowledge about Seth comes from the first-century Jewish historian Titus Flavius Josephus (37 – c. 100 AD). In Book I of *The Antiquities of the Jews* written c. 94 AD, Josephus describes Seth and his sons’ invention of astrology/astronomy and how they inscribed this wisdom on two pillars, one of brick and one of stone, so that if Adam’s prediction of the end of the
world were to come to fruition this science might not be lost.\textsuperscript{232} He concludes by remarking on how the descendants of Seth were afforded long life so that they were able to properly observe the stars.\textsuperscript{233}

Seth is portrayed in the Sala Bologna as a young man with reddish hair and beard. Referencing the clothing fashioned by God for Adam and Eve and their descendants as described in Genesis 3:21, the lower half of Seth’s body is wrapped in animal skin that is held in place by a green leather strap across his chest.\textsuperscript{234} He gazes upward and wears a headdress that resembles a *kurbasia*, *t i a r a*, or *k i d a r i s*, a soft hat with a pointed top and earflaps—here tied up—and often found in eastern dress.\textsuperscript{235} In his right hand he grasps a blank stone tablet and holds a ring in his left hand above his head symbolizing the lineage of authority, or more specifically here, the passage of knowledge.\textsuperscript{236} His left foot rests upon an open book with blank pages and placed on the ledge below.

Behind and to the left of Seth is an elderly man who must be interpreted as Adam, from whom Seth’s knowledge came.\textsuperscript{237} Adam rests his right hand on the ledge upon which

\textsuperscript{232} “[Seth and his sons] were the inventors of that peculiar sort of wisdom which is concerned with the heavenly bodies, and their order. And that their inventions might not be lost before they were sufficiently known, upon Adam’s prediction that the world was to be destroyed at one time by the force of fire, and at another time by the violence and quantity of water, they made two pillars, the one of brick, the other of stone: they inscribed their discoveries on them both, that in the case the pillar of brick should be destroyed by the flood, the pillar of stone might remain, and exhibit those discoveries to mankind; and also inform them that there was another pillar of brick erected by them. Now this remains in the land of Siriad to this day.” Josephus, “The Antiquities of the Jews,” in *The Life and Works of Flavius Josephus*, ed. and trans. William Whiston (Philadelphia: The John C. Winston Co., 1957), I.67. Whiston argues that Josephus confused Seth with the Egyptian king Sesostris, who also built pillars in Siriad, but this was not common knowledge during Gregory’s time.

\textsuperscript{233} Josephus, I.104.

\textsuperscript{234} For these animal skins see John Russell Sale, *The Strozzi Chapel by Filippino Lippi in Santa Maria Novella* (PhD diss., University of Pennsylvania, 1976), 194; and Gerhart B. Ladner, “The Philosophical Anthropology of Saint Gregory of Nyssa,” *Dumbarton Oaks Papers* 12 (1958): 88. Filippino Lippi’s portrayal of Seth as a child in the 1487-1502 ceiling fresco of *Adam*, part of the Strozzi Chapel cycle in Santa Maria Novella in Florence, is similar to that of the Sala Bologna with its inclusion of animal skins and curly red hair.

\textsuperscript{235} My many thanks to Tuna Sare for her help in identifying this type of headdress.

\textsuperscript{236} For the symbolism of rings see James Hall, *Dictionary of Subjects and Symbols in Art* (Boulder: Westview Press, 2008), 273.

\textsuperscript{237} In books XXV-XXIX of the *Books of Adam and Eve*, a first-century Jewish pseudepigraphical text, Adam tells Seth of what he learned after eating from the Tree of Knowledge, including what God had planned for
his son sits and fixes his gaze in the same general direction. To the right of Seth are two younger men, a reference to his sons. They both have reddish curly hair like their father, and likewise gaze upwards. In the background is an Ionic marble column and a brick pillar, both of which are inscribed with writing and illustrate the Pillars of Seth as described by Josephus.238

The Latin word filii located in the identifying inscription above the figures alludes to “sons”, but this particular declension of filius is unusual, and therefore necessitates exploration in order to reach the correct meaning.239 In Genesis 6:1-2 in the Latin Vulgate one reads: “Cumque cópissent homines multiplicari super terram, et filias procreassent, Videntes filii Dei filias hominum quod essent pulchrae, acceperunt sibi uxorès ex omnibus, quas elegerant” (“And after that men began to be multiplied upon the earth, and daughters were born to them, The sons of God seeing the daughters of men, that they were fair, took to themselves wives of all which they chose”). Here, the Latin filii is used to refer to “sons of,” in this case, God.

Further, in his ninth century Glossa Ordinaria, Walafrid Strabo comments upon the above passage, writing: “Videntes filii Dei, etc.: Filii Seth religiosi intelliguntur per filios Dei…” (“When they saw the sons of God, etc.: The sons of Seth, understood by the religious as the sons of God…”).240 From this we learn that “filii Del” or “the sons of God”...
here refer to the “sons of Seth” ("filii Seth"). Although this passage does not relate directly to the figure of Seth as portrayed in the Sala Bologna, the use of “filii Seth” demonstrates that this phrasing was used to describe Seth’s descendants.  

Although the Latin in the Sala Bologna inscription refers to the “sons of Seth,” I maintain that the central figure in this niche is Seth himself and not one of his sons. There is no reference to a specific son in the legend of the Pillars, and moreover, it was Seth and his sons who erected them, not the sons acting alone. In fact, after Seth, there is no mention of a specific master of astronomy until Enoch, Seth’s great-great-grandson.  

A comparison of contemporary representations of Seth further clarifies the identity of the various figures painted here. In the Renaissance, Seth is commonly found within scenes of the Death of Adam. Despite his age of 800 years when his father died, he is often portrayed as a youthful man with long hair kneeling at Adam’s grave, as seen for example in Agnolo Gaddi’s c. 1380 fresco of Seth at the Entrance to Paradise/The Death of Adam in the Cappella Maggiore, Santa Croce, in Florence [fig. 100], and Cenni di Francesco di Ser Cenni’s 1410 fresco The Death of Adam in the Cappella della Croce, San Francesco, in Volterra [fig. 101].
Although Josephus gives no indication of Seth’s age when he and his sons erected the Pillars, or whether or not this happened after Adam’s death, we know that Seth was 105 years of age when his eldest son Enos was born, and therefore he would necessarily be of an advanced age when building the Pillars. Given that artists in the Renaissance often portrayed a youthful Seth at his father’s funeral, it follows that the central figure in the Sala Bologna represents a similar generalization and not an accurate description of his age at the time of the Pillars.

Giovanni Baglione’s 1588-1589 fresco of the Sons of Seth in the Salone Sistino in Sixtus V’s wing of the Vatican Library uses similar iconography to that found in the Sala Bologna [fig. 102]. Given the visual similarities between the two, as well as their close dating and location, Gregory’s example undoubtedly inspired his successor’s fresco. Baglione here illustrates two of Seth’s sons, both dressed in animal skins and fur and standing between the two Pillars. Their facial features and hair—one red and curly, the other brunette and disheveled—closely resemble Sabatini’s own iconography of the two figures behind Seth in the Sala Bologna.

The story of the Pillars of Seth occupied the minds of Renaissance thinkers who were interested in the origin and history of mathematics and astrology/astronomy, and Josephus remained the principle source into the sixteenth century. In his treatise,

244 I am indebted to Paul Taylor at the Warburg Institute Photographic Collection for alerting me to this image. An accompanying inscription on the fresco reads, FILII SETH COLUMNIS DVABVS / RERVM COELESTVM / DISCIPLINAM INSCRIBVNT, on which see Domenico Fontana, Della Trasportatione dell’Obelisco Vaticano et delle Fabbriche di Nostro Signore Papa Sisto V (Rome: Domenico Basa, 1590), 89. For the frescoes of the Salone Sistino see Angela Böck, “Gli affreschi sistini della Sala di Lettura della Biblioteca Vaticana,” in Sisto V, ed. Marcello Fagiolo and Maria Luisa Madonna (Rome: Istituto Poligrafico e Zecca dello Stato, 1992), 695-716.

245 Nicholas Popper relates how the legend of the Pillars persisted into the seventeenth century and that prominent historians including Christophe Milieu and Sir Walter Raleigh, as well as the mathematician John Wallis, discussed them. Moreover, he notes that these same scholars used the Pillars as evidence that mathematics and astrology were both developed and used in the ancient world. See Nicholas Popper, “‘Abraham, Planter of Mathematics’: Histories of Mathematics and Astrology in Early Modern Europe,” Journal of the History of Ideas 67 (2006): 104-105.
Disputationes adversus astrologiam divinatricem, published posthumously in 1496 by his nephew in Bologna, Pico della Mirandola claims that Ptolemy was the first to practice astrology, but maintains that Seth developed both mathematics and astronomy. In his work Berosi sacerdotis Chaldaici, antiquitatum Italie ac totius orbis libri quinque of 1498, the Dominican friar Giovanni Nanni, better known as Annius of Viterbo, writes in the voice of the historical Berosus, a fourth-century BC Chaldean priest, and describes how his people were fluent practitioners of astrology, and how they acquired this knowledge from the Pillars of Seth. Finally, in the 1499 De inventoribus rerum, the Italian humanist Polydore Vergil relates how, according to Josephus, Seth and his sons were the inventors of astrology/astronomy. Additionally, he includes a description of the Pillars, and how this ancient science was subsequently passed on to the Chaldeans.

THEVT, Egyptian god of the Moon, inventor of all knowledge

Two Egyptian gods, Theut and Isis, are included in Mascherino’s quadratura. Like the classical world, ancient Egypt held a certain fascination in the minds of Early Modern thinkers, many who believed that writing, science, organized religion, history, and the arts were developed in that civilization. Moreover, Brian Curran, who has written extensively on the impact of Egyptology in the Renaissance, elaborates on the theme of ancient Egypt as

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246 Popper, 90-93.
248 Polydore Vergil, On Discovery, ed. and trans. by Brian P. Copenhaver, (Cambridge: Harvard University Press, 2002), 141-143. Polydore Vergil also suggests that these Pillars exemplify that Seth and his sons were the inventors of writing and letters.
249 Renaissance Humanists would have been familiar with the early histories that assert this claim. For example, Aristotle, in his Metaphysics, notes that mathematics developed in Egypt. Aristotle in Twenty-three Volumes, vols. 17 and 18, trans. Hugh Tredennick (Cambridge: Harvard University Press; London: William Heinemann Ltd., 1933), I.981b.20. Herodotus, II.109.2-3, describes how the Egyptians invented geometry so as to calculate the annual flooding of the Nile.
the cultural ancestor of the Greco-Roman world. This belief, as well as the explosion of knowledge resulting from the rediscovery of ancient texts and the recovery of buried artifacts in Rome, led to a heightened interest in the ancient Egyptian world.

Among the surviving artifacts spread throughout the city of Rome were the obelisks and various statues of the gods and sphinxes, but as Curran notes, it is unlikely that the provenance of these objects was ascertained until the advent of Humanism. The prominent location of these monuments and sculptures in public spaces demonstrates that these works were prized in the Middle Ages, but it was not until the papacy returned to Rome after the Western Schism (1378-1417) and took a renewed interest in the city and her history that the Humanist circle of Niccolò de Niccoli (1364 – 1437), Poggio Bracciolini (1380 – 1459), Flavio Biondo (1392 – 1463), and Alberti (1404 – 1472) began cross-referencing these monuments with ancient texts to elucidate their Egyptian origins.

In addition to scattered biblical references, the most useful written sources on this ancient civilization were the Greco-Roman authors who described Egypt and her monuments, including Pliny’s *Natural History*, and Apuleius’ *Metamorphoses* (renamed the *Golden Ass* by St. Augustine), both printed in 1469. The rediscovery and partial translation of

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252 Curran 2004, 298. See also Dannenfeldt, 24. Pastor notes how Gregory XIII had the desire to move the obelisk located within the Circus of Nero but was deterred by the cost. See Ludwig Freiherr von Pastor, *The History of the Popes from the Close of the Middle Ages*, ed. Ralph Francis Kerr (London: Kegan Paul, Trench, Trubner and Co., 1930), vol. 20, 558. Gregory’s successor, Sixtus V, realized the task and moved the obelisk to the front of St Peter’s.

253 For more on this circle and their activities, see Curran 2004, 298.
Diodorus (fl. 60 – 30 BC) in c. 1472 by Poggio Bracciolini further aided the interest in the Egyptians.254 This fascination continued into the sixteenth century, when in 1541 the Ferrarese Humanist Celio Calcagnini translated and published Horapollo’s fifth-century BC *Hieroglyphica* and Plutarch’s first-century AD *De Iside et Osiride*. Later writings that highlight the renewed interest in Egyptology include Francesco Colonna’s 1499 *Hypnerotomachia Poliphili*, and Leo Africanus’ c. 1526 *Descrizione dell’Africa*.

On a general level the Renaissance popes, like the Roman emperors long before them, used Egyptian artifacts and the representations of such to signify the conquering of this ancient land and the inheritance of its knowledge. Perhaps the best-known example of a pope appropriating Egyptian iconography is Alexander VI and his decoration of the Sala dei Santi within the Borgia apartments of the Vatican Palace painted by Pinturicchio between 1492-1494 [fig. 103].255 Here the story of Osiris and his sister-wife Isis fills the ceiling vaults.

A new generation of Humanists fascinated with Egyptian culture flourished in Pope Leo X’s court, including Baldassare Castiglione (1478 – 1529), Pietro Bembo (1470 – 1547), and Pierio Valeriano (1477 – 1558), among others. Leo himself was a patron of Egyptian imagery, especially favoring the sphinx, given its leonine association, and examples can be seen in the *grottesche* of Raphael’s Loggia and Loggetta. Moreover, it was at this time that many Egyptian or Egyptian-like antiquities were moved to public spaces, including the piazzas of the Pantheon, the Lateran, and the Campidoglio.256

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254 The entirety of Diodorus’ *Bibliotheca* was eventually translated and published in Geneva in 1559.
255 Other Renaissance popes with a particular interest in Egyptian artifacts and symbolism include Pius II, Paul II, and Sixtus IV.
256 Curran 2007, 196; and Curran, “‘De Sacrarum Litterarum Aegyptiorum Interpretatione.’ Reticence and Hubris in Hieroglyphic Studies of the Renaissance: Pierio Valeriano and Annius of Viterbo,” in *Memoirs of the American Academy in Rome*, vol. 43/44 (Bergamo: Istituto italiano d’arti grafiche, 1999), 155. Curran 1999, 156 is also useful for a discussion of the *Mass of St. John the Baptist* illumination from the Colonna Missal (1530-1538), which contains a variety of Egyptian imagery that was known at the time.
In the Sala Bologna, the inscribed name THEVT is the Greek translation Θοθ (Thōth or Theut) of the Egyptian name Thoth, and hence the spelling of the god’s name in the arcade above [fig. 104]. Like his sister Isis, Theut was well versed in magic, and he was the peacemaker or arbiter amongst the gods and mortals, as he was often responsible for maintaining order and harmony on both Earth and in the heavens. His main role in the Egyptian pantheon, however, was that of a moon god. Both the Egyptians and the Greeks described Theut as the inventor of all branches of science, including astrology/astronomy, land surveying, geography, mathematics and medicine. For example, in Plato’s c. 370 BC dialogue _Phaedrus_, Socrates tells his young student about the Egyptian god’s inventions.

The first-century BC Greek historian Diodorus, who likens the god to the Greek Hermes, also describes these scientific inventions. C.J. Bleeker elaborates on Diodorus’ attributions by arguing that as the god of the word, Theut was the creator of the world and the cosmos because it was he who gave expression to those entities by naming them and everything in them.

Hermes Trismegistus, the eponymous author of the _Corpus Hermeticum_, is traditionally thought of as the syncretic combination of the Egyptian Theut and the Greek Hermes (the

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257 For this translation see C.J. Bleeker, _Hathor and Thoth: Two Key Figures of the Ancient Egyptian Religion_ (Leiden: Brill, 1973), 106.

258 Bleeker, 117, 156.


260 “I heard, then, that at Naucratis, in Egypt, was one of the ancient gods of that country, the one whose sacred bird is called the ibis, and the name of the god himself was Theut. He it was who invented numbers and arithmetic and geometry and astronomy, also draughts and dice, and, most important of all, letters.” Plato, _Plato in Twelve Volumes_, vol. 9, trans. Harold N. Fowler (Cambridge: Harvard University Press; London: William Heinemann Ltd., 1925), 274c-274d.

261 Diodorus, I.16.

262 Bleeker, 137.
Roman Mercury). For example, in his 45 BC *De natura deorum* Cicero writes how Mercury went to Egypt in the fifth century and called himself Thoth/Theut. Further supporting this linking of personalities is Jacopo da Bergamo’s 1483 *Supplementum chronicarum*, a universal history that includes the Greco-Roman deities and in which Hermes Trismegistus is described as the first astronomer.

The *Corpus Hermeticum* was accepted in the Renaissance as a work of ancient Egyptian origin. The monk Leonardo da Pistoia, known as Leonardo de Candia Alberti (1428 - ?), rediscovered the text and brought it to the Medici court in Florence around 1460. At the bequest of Cosimo de’ Medici, Marsilio Ficino translated the work in 1463, and it was published in 1471. In his preface to the translation, Ficino likens Hermes Trismegistus to Thoth/Theut, referencing Cicero’s etymology of the name. Various editions of the *Corpus Hermeticum* were housed in the Vatican Library since the pontificate of Julius II, and therefore Gregory XIII and his court would have been familiar with the works of the ancient sage.

In the Sala Bologna, Sabatini imagines Theut with reddish hair and pink drapery held in place by a green leather strap across his bare chest. He leans back on his left elbow and

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265 “Mercurius alius egyptius fuit qui cognominabatur Trismegistus idest ter magnus ipse’tenpestate hac floruit primus stellarum apud Egyptios inuenor: qui eam obrem apud eos dem in introitu signorum solis: aliqua fieri solemnitatem mandauit.” 1485 edition, f. 21r.
266 Dannenfeldt, 10; Wayne Shumaker, *The Occult Sciences in the Renaissance* (Berkeley, Los Angeles, London: University of California Press, 1972), 207; and Yates, 3. For the complete translation of the *Hermetica* with commentary see A.J. Festugière, *La Révélation d’Hermes Trismégiste*, 4 vols. (Paris: Les Belles lettres, 1945). Another major text written by Hermes Trismegistus is the so-called Emerald Tablet, which became common doctrine for Renaissance alchemists. It was commented on and translated by Trithemius, Roger Bacon, Michael Maier, Aleister Crowley, and Albertus Magnus, among others. The brief text asserts that Hermes Trismegistus knew the three wisdoms of the universe: alchemy, astrology, and theurgy. Shumaker, 179-180 provides an English translation of the short text.
267 For the background of this text and its rediscovery see Shumaker, 201.
268 Shumaker, 202.
269 Rowland 1998, 156.
props up a blank stone tablet with his right hand.\footnote{In Sabatini’s preparatory sketch for the figure, Theut is shown with a closed book instead of the stone tablet [fig. 59]. For this drawing see Marinig, 185-195.} The god’s hair appears to be caught in a slight breeze, and this iconographic detail recalls the hair of a young boy leaning against the wall and writing on his knee on the right side of Raphael’s *School of Athens* [fig. 63].

To the right of Theut is a white ibis, associated with the god as he was often portrayed with the head of the sacred bird in antiquity [fig. 105]. Herodotus describes two types of ibis in Egypt, one of pure black and another that is white with a black beak and tail feathers.\footnote{Herodotus, II.75-76.} The ibis found in the Sala Bologna is pure white with a reddish beak, but accuracy was likely not the primary goal here. Rather, the bird stands first and foremost as a symbol of the god. In Pliny we find the explanation for the coiling serpent within the mouth of Sabatini’s bird, as he writes in his *Natural History* that the ibis was known for eating snakes and ridding the Nile valley of these pests.\footnote{Pliny, X.40.}

\begin{flushright}
\textit{ATLAS, Classical god who supports the heavens, teacher of astronomy}
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Representing classical mythology is the figure Atlas, the Greco-Roman god who was sent to the edges of the Earth and forced to uphold the celestial sphere for eternity after the defeat of the Titans in the Titanomachy. Given his support of the heavens, Atlas is intrinsically linked to astrology/astronomy, and various ancient sources detail the god’s knowledge of this science. Virgil elaborates on Atlas’ fate, writing in *The Aeneid* that he not only upheld the heavens, but also caused them to spin.\footnote{Virgil, \textit{The Aeneid}, trans. John Dryden (New York: P.F. Collier and Son, 1909), VI.796-797. See also Polydore Vergil, I.17. In his discussion of Francesco di Giorgio Martini’s drawing of Atlas, Fritz Saxl notes how the positioning of the god’s body in this representation illustrates his control over the movements of the heavens. See Fritz Saxl, “Atlante al servizio della geografia astrologica,” in \textit{La fede negli astri dall’antichità al Rinascimento}, ed. Salvatore Settis (Turin: Editore Boringhieri, 1985), 293.} In Pliny’s *Natural History*, the Titan
was the inventor of astrology/astronomy,\textsuperscript{274} and in \textit{The Odyssey}, Homer writes how Atlas
taught this science to his daughter Calypso who in turn instructed Odysseus.\textsuperscript{275} Finally, the
Renaissance author Marsilio Ficino (1433 – 1499), in his c. 1471 preface to his translation of
Hermes Trismegistus’ \textit{Corpus Hermeticum}, notes that Atlas was an astrologer at the time of
Moses.\textsuperscript{276}

Perhaps the richest source describing the god’s knowledge of the heavens is
Diodorus’ \textit{Bibliotheca historica}. As the historian relates, Atlas imparted his wisdom on
Hercules during the hero’s twelve labors.\textsuperscript{277} Diodorus continues on, outlining how the Titan
was the first to publish these secrets, and how this learning then spread throughout the
Greek world.\textsuperscript{278} This tradition of Atlas as a teacher of the heavenly sciences continued into
the Renaissance with Jacopo da Bergamo’s \textit{Supplementum chronicarum} in which he explains how
the Titan taught the Greeks the practice of astrology.\textsuperscript{279} Later still is the 1599 \textit{Mythologici
Latini}, which again relays the story of Atlas teaching Hercules.\textsuperscript{280}

Additionally significant within the context of Gregory XIII is Atlas’ association with
cartography. Although there is no legend that explicitly links him to map-making, the
connection was made in 1572 when Antonio Lafreri used an image of the god for the title

\textsuperscript{274} Pliny, VII.57. See also Polydore Vergil, I.17.
\textsuperscript{275} Homer, \textit{The Odyssey}, trans. A.T. Murray (Cambridge: Harvard University Press; London, William Heinemann,
Ltd., 1919), V.276. See also Don Cameron Allen, \textit{Mysteriously Meant: The Rediscovery of Pagan Symbolism and
\textsuperscript{276} Hermes Trismegistus, \textit{Hermetica}, vol. 1, ed. and trans. by Walter Scott (Oxford: The Clarendon Press, 1924),
31.
\textsuperscript{277} Diodorus, IV.27.
\textsuperscript{278} “They also say that he perfected the science of astrology and was the first to publish to mankind the
doctrine of the sphere; and it was for this reason that the idea was held that the entire heavens were supported
upon the shoulders of Atlas, the myth darkly hinting in this way at his discovery and description of the sphere.”
Diodorus, III.60.
\textsuperscript{279} “Atlas et ipse Archadicus Promethei frater seu ut alarius placet filius et Maie pater. Hac quoque tempestate
vir excellentis vene et multe contenplationis clarus fuit Quiquee Astrorum cursum peruiigli studio comprehendit
et primus de Astrologia inter grecos differuit propter que finxerunt fabule eum celum portare: quamuis idem
mons eius nomine nuncupetur: Luius altitudinem celi portationem in opinionem vulgi venisse videatur.” 1485
dition, f. 19v.
\textsuperscript{280} See A. Van Staveren ed., \textit{Auctores mythographi Latini} (Leyden and Amsterdam, 1742), 937. See also, Allen, D.,
214, n. 39.
page of his book of maps, *Tavole Moderne di Geografia de la Maggiore Parte del Mondo di Diversi Autori*.\(^{281}\) Six years later, the cartographer Gerard Mercator cemented this correlation when he dedicated his book of maps to the Titan in 1578.\(^{282}\)

Atlas is painted in the Sala Bologna as an old man with a long grayish-white beard and a white hood covering his head [fig. 106]. A red cloak attached at the shoulder billows out behind him, and the influence of both Michelangelo and Raphael’s frescoes in the Vatican Palace can be seen in the god’s bright, multi-colored clothing.\(^{283}\) The Titan looks at a stone tablet held in his left hand that is inscribed with the phrase ATLAN / MAX, or *Atlantigena Maxime*, the greatest of those begotten of the god. Although he has a strong and determined gaze, his melancholic expression represents the weight of his burden.\(^{284}\) In comparison to Baldassare Peruzzi’s 1526 woodcut *The Triumph of Fortune* [fig. 107], and the reverse of a c. 1550-1555 medal honoring Julius III [fig. 108], both of which show a relatively younger and extremely muscular god, Sabatini’s Atlas more closely follows the examples of Giulio Bonasone’s mid-sixteenth-century engraving from the *Emblems of Achilles Bocchius* [fig. 109], and Jacopo Zucchi’s 1575 *Assembly of the Gods* [fig. 110], each of which portrays an older and slightly weaker figure with a long beard.

In the Sala Bologna the god does not hold the universe on his shoulders but instead sits in front of a golden armillary sphere with the zodiac inscribed across the central band; the small blue sphere in the center of this instrument indicates a central Earth, demonstrating the belief in a Ptolemaic or geocentric universe upheld at the time. The


\(^{282}\) For Mercator see Woodward 2007B, 1323-1325. The frontispiece on the 1595 edition of Mercator’s atlas shows a similar representation of the god to that found in the Sala Bologna.

\(^{283}\) The saturated colors and drapery styles of the figures within the Sala Bologna *quadratura* especially recall those found in Michelangelo’s Sibyls and Old Testament prophets on the Sistine ceiling and Raphael’s figures in the Stanza della Segnatura.

\(^{284}\) For a discussion on the visual tradition of Atlas in the Renaissance see Saxl 1985.
depiction of Atlas with an armillary sphere is unique, and it pays homage to the instruments used in practical sixteenth-century astronomy. In comparison to other Renaissance examples that show the god with a solid globe, such as Battista Zelotti’s c. 1556 Atlas, Geometry, Astrology and the River Nile on the ceiling of the Biblioteca Marciana in Venice [fig. 111], or Bonasone’s engraving [fig. 109]), the use of an armillary sphere in the Sala Bologna recalls the iconography of antiquity in which the god holds the heavens themselves. This is best seen in the Farnese Atlas, with a depiction of the outermost celestial sphere clearly indicated by the constellations and zodiacal ring [fig. 112].

ISIS, Egyptian goddess of the Moon, Queen of heaven, creator of the universe

Next to Atlas in the center niche of the western wall is the Egyptian goddess Isis, the only female depicted within the room. Sister-wife of Osiris, god of the underworld, and mother of Horus, a sun god, Isis’ main role within the pantheon of Egyptian gods was as the Queen of Heaven and creator of the universe. Diodorus is one of the richest sources concerning her myth, and as a Greek he equates her to the goddess Demeter. He describes her as a moon goddess, and states that she became the Queen of Heaven after she reassembled her slain husband and killed his murderer Set. He continues on to describe her affinity and knowledge of magic, and how, with Osiris, she rules over everything that they created together. Furthermore, he relays the epitaph inscribed on her grave stele:

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285 Sabatini’s preparatory drawing [fig. 60] shows a detailed sketch of the instrument complete with the zodiacal band, indicating that this portrayal was planned from the beginning. In the drawing the sphere is closer to the figure of Atlas, touching his right elbow. For the drawing see Marinig, 185-195.

286 There are certainly Renaissance representations of Atlas carrying the celestial sphere, as this can clearly be seen in Peruzzi’s woodcut [fig. 107] and on the medal of Julius III [fig. 108], but the solidness of the sphere in these two images differs greatly from the ephemeral quality of the heavens in the Farnese Atlas.

287 Diodorus I.11; I.13.30; I.21. Polydore Vergil, I.1, also describes her as a moon goddess.

I am Isis, the queen of every land, she who was instructed by Hermes [Theut], and laws I have established, these no man can make void. I am the eldest daughter of the youngest god Chronos; I am the wife and sister of the king Osiris; I am the mother of Horus the king; I am she who riseth with the star [Sirius] that is in the constellation of the Dog [Canis Major], by me was the city of Bubastis built...

Plutarch, in his first-century AD *De Iside et Osiride*, embellishes on the goddess’ association with Sirius, noting that with it come the rains for the annual flooding of the Nile river.

The parallel between the star and the goddess comes from the fact that Isis was also associated with the life-giving waters of the Nile, and members of her cult often carried pitchers of this revered water for religious ceremonies.

In his *Metamorphoses*, Apuleius describes how Isis is the Queen of Heaven and controls the movements of the celestial bodies. The early Christians equated Isis to the Virgin Mary, given that both were thought to be beneficent mother goddesses who miraculously conceived their sons, and whose sacred symbol was the rose. Moreover, the iconography of Isis suckling the infant Horus is similar to imagery of the Virgin and Child, and this parallel was not lost on the early Christians.

Sabatini paints his Isis as a young woman with blonde hair gazing to the upper right and wearing garments of light purple, yellow, and white [fig. 113]. The coloring of her drapery may be a reference to Plutarch, who describes the goddess’ variegated clothing.

Sabatini may have modeled his figure after the earlier depiction of the same goddess in the

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289 Diodorus, I.27.4-5.
293 See Curl, 38-45, esp. 38-40; and Donalson 3, 6, 11.
294 Plutarch, 77.
nearby Sala dei Santi of the Borgia apartments, who herself is speculated to have been based on the beauty of Alexander VI’s own daughter Lucrezia Borgia. Given the dearth of contemporary depictions of the goddess, however, it is also possible that the artist here embodied Isis with the general attributes of ideal beauty at the time—fair skin, blonde hair, and blue eyes—as appropriate for the representation of the Queen of Heaven.  

Isis rests her right foot on a closed book with green leather binding, and her right hand gestures outward. In her left hand she holds a *sитула*, an ancient vessel used for carrying liquids [fig. 114]. She props the container on her left knee so that a few drops of liquid spill out of the top. In Roman antiquity it was common for the goddess to be shown with a *sитула*, as she used the vessel to carry water from the Nile, or to hold her sacred breast milk [fig. 115].

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**THALES** (c. 624 – c. 546 BC), *Pre-Socratic Greek philosopher*

Following the various gods depicted, the remaining six figures in the Sala Bologna represent a selection of the most influential practitioners of astrology and astronomy. In the history of natural philosophy it is generally agreed upon that the Milesians, of which Thales and Anaximenes are here represented, were the pioneers of this practice in the western world, and that Ptolemy represented its golden age in antiquity. The figures of Marcus Manilius and Alfonso X bring this science into the Roman and Medieval world respectively.

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295 In ancient art, the goddess was often portrayed with a crown of two cow horns and the solar disc of her son Horus placed between them. Contemporary imagery includes the Sala dei Santi, and also a statue commissioned by Pope Leo X that was carried in a parade during Carnevale in 1520, on which see Curran 2007, 190-191.

296 Donalson, 13.

The interest in and recovery of ancient scientific texts exploded under Pope Nicholas V (1447 – 1455), and he and his successors placed their collections of manuscripts and printed editions within the Vatican Library. The works of Thales and Anaximenes have not survived history, but Aratus, Ptolemy, Manilius, and Alfonso X are each represented in the Vatican Library in both manuscript and book form. That Gregory XIII was familiar with this collection is without doubt, given his interest in the natural sciences, and this provides insight into the selection of each figure.

Thales was the first of the three so-called Milesian philosophers, followed by his students Anaximander and Anaximenes. Aristotle, Cicero, Diogenes, and Hippolytus, among others, identify him as the first true philosopher, given his explanations of natural phenomena and the world around him with reason and theory rather than with mythology and magic. His commitment to philosophical inquiry is summarized in an anecdote in Plato’s *Theaetetus*, in which Socrates relays to Theodorus about how Thales was disinterested in practical concerns.


299 “Why take the case of Thales, Theodorus. While he was studying the stars and looking upwards, he fell into a pit, and a neat, witty Thracian servant girl jeered at him, they say, because he was so eager to know the things in the sky that he could not see what was before him at his very feet. The same jest applies to all who pass their lives in philosophy.” Plato, 174a. This same story is also recorded by Hippolytus, I.1; and Diogenes, I.8. A second mention of this tale in Diogenes’ *Life of Anaximenes*, II.3, is worth quoting in full. “Thales, the son of Euxamias, has died in his old age, by an unfortunate accident. In the evening, as he was accustomed to do, he went forth out of the vestibule of his house with his maid-servant, to observe the stars: and (for he had forgotten the existence of the place) while he was looking up towards the skies, he fell down a precipitous place. So now the astronomer of Miletus has met with this end. But we who were his pupils cherish the recollection of the man, and so do our children and our own pupils: and we will lecture on his principles. At all events, the beginning of all wisdom ought to be attributed to Thales.” This is the only account of Thales’ death, and moreover, Diogenes once again asserts that Thales was the father of natural philosophy.
Bridging the crossover in the Sala Bologna between the mythological figures and historical individuals, the placement of Thales next to Isis visually confirms that the Milesian philosopher was the first to bring knowledge of arithmetic, astronomy, and philosophy to Greece after learning these specialties during his time in Egypt. Several historians relate his travels in Egypt including Diogenes, who records that the philosopher mastered his trade while in Egypt. Further, the later Greek philosopher Proclus (412 – 485) notes that Thales introduced mathematics to Greece upon his return. Thus, given these accounts, the placement of Thales next to Isis and near Theut, effectively traces the transfer of knowledge from Egypt to Greece, and supports the sixteenth-century belief that the arts and sciences first developed in the land of the Pharaohs.

Thales’ most famous hypothesis was that the inherent element of all things on earth and in the heavens is water. As Aristotle records in his *De Caelo*, Thales’ theory of the universe includes a flat earth that floats upon water. More significantly, from this idea comes the Milesian’s explanation of earthquakes, which he believed were caused by ripples in this water, rather than by the whims of the god Poseidon. This is the first recorded attempt at explaining an environmental occurrence using theory instead of mythology, and it

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301 Diogenes, I.6. Polydore Vergil, 141, notes that he was a “disciple” of both the Egyptians and the Chaldeans. See also Allen, D., 36, 107; and John Burnet, *Early Greek Philosophy* (London: A. & C. Black, Ltd., 1950), 41-44.


305 See Seneca, III.13.2 and VII.1.1. For modern scholarship, see Guthrie 1962, 68; and Longrigg, 297.
gives Thales precedence within the history of natural philosophy; that his conclusion is incorrect matters little in comparison to his method.

In *The Lives and Opinions of Eminent Philosophers*, Diogenes notes that many ancients, including Eudemus, proposed that Thales was the first to study astronomy. In fact, although little is known of the Milesian’s written works, Diogenes suggests that he may have written on the solstices and equinoxes. Moreover, from this historian we get a sense of Thales’ discoveries, including his calculations of both the ecliptic and magnitude of the Sun. Of his astronomical investigations, Thales is best remembered for his prediction of a solar eclipse. Herodotus describes the event, which took place during the sixth year of the battle between the Lydians and the Medes, and which modern scholars have calculated as the eclipse that occurred on May 28, 585 BC.

Given the interests of Gregory XIII it is also worth noting that Thales was the first to understand the calculation of time and the usefulness of a calendar. Diogenes explains how he named the last day of the month, implying that the Milesian had drafted a calendar and calculated the months of the year. Building upon this notation and adding more detail are Polydore Vergil’s remarks on Thales’ division of the year into 365 days.

Thales appears in the Sala Bologna as an elderly man with a white beard [fig. 116].

The only contemporary image to compare is Francesco Marcolino da Forti’s woodcut from

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306 Diogenes, I.2. The Greek philosopher Theon of Smyrna (fl. 100 AD) also notes the description of Thales within Eudemus' lost work, on which see István Bodnár and William W. Fortenbaugh, eds., *Eudemus of Rhodes* (New Brunswick: Transaction Publishers, 2002), 3.39-41. Later historians also list Thales as the first astronomer, including Hippolytus, I.1; and Polydore Vergil, 141, 143.

307 Diogenes, I.4.

308 Diogenes, I.3.

309 Herodotus, I.74.2.

310 See Burnet, 43; Guthrie 1962, 47-49; Longrigg 295; and Alden A. Mosshammer, “Thales’ Eclipse,” *Transactions of the American Philological Association* 111 (1981): 145-155. Each of these scholars discuss how it is now widely believed that Thales’ prediction was a lucky guess, given his lack of knowledge in regards to the curvature of the Earth, but again, this was not the conception during antiquity or the Renaissance.

311 Herodotus, I.74.2.

312 Polydore Vergil, 225.
his 1540 series *Le Sorti* that shows the astronomer with an armillary sphere [fig. 117]. Later portrayals are likewise few and far between, and include a drawing by Rubens [fig. 118].

Sabatini’s Thales wears multi-colored robes of red, blue, and yellow, a white turban, and leather sandals, and sits in front of a stack of leather-bound books with metal clasps. With both arms outstretched he gazes into the center of the atrium above towards a depiction of the Sun that appears to be in the middle stages of a solar eclipse. The lunar disc is painted in shades of yellow and gray and covers most of the Sun, leaving only a ring of stark white light representing the corona seen only during totality. Radiating outwards from the corona are golden rays of light that illuminate the painted space below. Such an accurate imitation of a solar eclipse (see figure 119 for a photograph of a solar eclipse) is in contrast to schematic imagery, as seen, for example, in Giorgione’s c. 1504-1505 fresco in the Castelfranco Veneto [fig. 120], and suggests that Sabatini either personally witnessed such an event or carefully studied diagrams or descriptions. An earlier and similarly accurate representation is found in Raphael’s Loggia (1518-1519), in the scene of *Isaac, Rebecca, and Abimelech*, which may also have provided inspiration [fig. 121].

In addition to representing Thales’ astronomical predictions and calculations, the Sun painted here in the eastern corner of the room provides artificial light for each of the atriums and casts illusionistic shadows onto the bronze rods above each.

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ANAXIMENES (585 – 528 BC), Pre-Socratic Greek philosopher

Situated in the corner next to the elder Thales is one of his followers, Anaximenes, the last of the Milesian philosophers, and a figure who represents the end of this school of thought.\(^{314}\) The philosopher is best known for adopting his mentor’s hypothesis of a single element inherent in all things; where the two differ is the substance itself. While Thales maintained that water was the principle element, Anaximenes postulated instead that it was air.\(^{315}\) Further, he argued that when air is condensed or rarefied, it creates everything else on Earth and in the heavens.

Anaximenes also developed a theory of the universe in which the stars, the Sun, and the Moon, were floating balls of fire created from transformed air.\(^{316}\) He theorized on the movements of the stars, suggesting that they rotated around the flat Earth and disappeared when they were far away, or when they were blocked by differing elevations of the earthly terrain.\(^{317}\) Finally, he noted that given their extreme distance from the Earth, the stars produced no heat.\(^{318}\) Although his solutions were simplistic at best, Anaximenes, like Thales, was among the first to question the origin of things and argue explanations based on observation, making him a forerunner of natural philosophy, or what we today would describe as science.

In the Sala Bologna, Anaximenes is depicted as an elderly man with flowing white hair and beard. He wears multi-colored drapery of green and red, as well as an ivory-colored

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\(^{314}\) From Diogenes II.1, we know that Anaximenes was a student of Anaximander, who was himself a student of Thales. See also L. Tarán, “Anaximenes of Miletus,” in Dictionary of Scientific Biography, vol. 1, 152.

\(^{315}\) Diogenes, II.1; and Hippolytus, I.6. For modern scholarship see Guthrie 1962, 115, 121; D. Lindberg, The Beginnings of Western Science: The European Scientific Tradition in Philosophical, Religious, and Institutional Context, Prehistory to AD 1450 (Chicago and London: The University of Chicago Press, 2007), 28-29; and Tarán 2008A, 152.

\(^{316}\) Hippolytus I.6. See also, Lindberg 1992, 152.


\(^{318}\) Hippolytus, I.6.
shirt [fig. 122]. He looks over his left shoulder towards his neighbor Aratus, and holds a closed book of red leather in his right hand. Two other books appear near his right leg. On the base of the column behind him sits a sundial, an astronomical instrument used to measure time by means of the Sun’s position [fig. 123]. It is from Pliny that we learn of Anaximenes’ invention of the sundial.319

The shadow from the sundial’s needle corresponds to the angle of light coming from the Sun above Thales. The use of light here, coming from the eclipse above the eldest Pre-Socratic philosopher and reflected on the instrument of the youngest, is a clever symbolic visualization of the passage of knowledge between the two. More specifically, the needle points to the Roman numeral V, indicating the time 5:00 pm.320 Such a visible and precise detail must have been deliberate, and the timing indicated is almost certainly a reference to Gregory XIII’s election on the evening of May 13, 1572. The most dependable source regarding the details of the Boncompagni pope’s election is Alessandro Musotti, confidant and close friend to Gregory XIII, who records the coronation at twenty-two hours, or roughly 5:20 pm.321

ARATUS (c. 310 – c. 240 BC), Greek poet

The next figure portrayed in the Sala Bologna is Aratus from Soli, the first poet of the group. His biographical details are scattered, but we know that he spent time in both

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319 Pliny, II.78.
320 My thanks to Darrelyn Gunzburg for her help with this observation.
321 Musotti records, “[Il] Conclave, quale a fatica fu chiuso, che fu chiuso alle otto hore di notte, il di 12 g Maggio, et usci Pontefice alle 22 hore il giorno seguente, che fu li 13 di Maggio.” BAV, Bonc. D7, f.12r. See also Pastor IXX, 12. This calculation for 5:20 pm comes from the Italian system of time still upheld, when the new day began with Vespers roughly twenty minutes after sunset. See J.L. Heilbron, The Sun in the Church: Cathedrals as Solar Observatories (Cambridge and London: Harvard University Press, 1999), 267; and Mary Quinlan-McGrath, “The Villa Farnesina, Time-Telling Conventions and Renaissance Astrological Practice,” Journal of the Warburg and Courtauld Institutes 58 (1995): 52-71. For Musotti and a complete list of references to Gregory’s election see Appendix 5.
Athens and at the court of the Macedon King Antigonus II Gonatas (276 – 239 BC). He is best known for his poem the *Phaenomena*, his only extant work, in which he describes the constellations of both the northern and southern hemispheres.

Likely written during his time in Macedonia, the *Phaenomena* is 1,154 hexameters in length and is based upon the earlier work of the same name by the mathematician and astronomer Eudoxox of Cnidus (410 or 408 – 355 or 347 BC). The poem is not the first to identify the constellations, but Aratus’ straightforward language made the otherwise complicated celestial phenomena easy to understand, and the work thus became immediately popular in the ancient world.

The text begins with a short dedication to Zeus, in which Aratus establishes the god as a benevolent deity who rules over the motions and movements of a harmonious universe. In line 5 the poet describes how all men are the children of Zeus, whom the Apostle Paul reinterprets as the Christian God in Acts 17:28 when he referenced the ancient poet: “For in [God] we live and move and exist, as even some of your own poets have said, ‘For we are also His offspring.”

Beginning with line 19 of the next section, Aratus describes a geocentric universe with a fixed and immobile earth at the center of the divine spheres. The remainder of the second section is dedicated to a detailed account of the location and orientation of each constellation with mythological narratives woven throughout, making the *Phaenomena* one of the earliest surviving records to relay the various stories of how the constellations obtained

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323 A selection of titles of his lost works survive, including the *Hymn to Pan*, *Epideceia*, *Ostologia*, and *Catalepton*, on which see Tarán 2008B, 204.
their names and shapes. Next, seven brief lines are devoted to the planets, after which comes an explanation of the celestial spheres. Here Aratus describes the Milky Way as well as the principle meridian lines. This is followed by an illustration of the calendar, including the risings and settings of the stars, the lunar months, and the seasons. The poem concludes with a large section devoted to weather and its various signs.

The *Phaenomena* cannot be labeled a scientific work, as it was not based on calculation or observation, but instead it was meant as a colorful description of the heavens and the constellations contained therein. The ancient Greek astronomer Hipparchus wrote an extensive commentary on the work, describing its faulty astronomy and recommending that it should not be relied upon for accuracy. Given the poem’s usefulness as a basic guide to the stars, however, Hipparchus also notes the immense popularity of the work and the praise awarded to it by other contemporary commentators.

It was precisely this description of the constellations, as well as that of a geocentric universe, that popularized the *Phaenomena*. Translated from the Greek into Latin by Cicero, manuscripts in both languages flourished throughout the Middle Ages and into the Early Modern world. As exemplified by the ninth-century French manuscript now in Leiden [fig. 124], and the 1469 Italian manuscript illuminated by Giovanni Marco Cinico

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326 For an English translation of this commentary see Mark Possanza, *Translating the Heavens: Aratus, Germanicus, and the Poetics of Latin Translation* (New York, ct. al.: Peter Lang, 2004), 90. For the original Greek, see Carolus Manitius, *Hipparchi in Arati et Eudoci Phaenomena Commentariorum libri tres* (Leipzig: In Aedibus B.G. Teubneri, 1894), 4-5.

327 The evidence for this translation comes from Cicero’s own *de Natura Deorum*, II.41: “Here he [Gaius Cotta] looked at me and said, ‘I will make use of the poems of Aratus, as translated by yourself when quite a young man, which because of their Latin dress give me such pleasure that I retain many of them in memory.’”

328 The Vatican Library contains several Greek manuscript copies of Aratus, for which Gregory XIII would have been familiar, including Vat. gr. 1307 (late eleventh/early twelfth century); Vat. gr. 1910 (late thirteenth/early fourteenth century); Vat. gr. 199 (fourteenth century); and Vat. gr. 1371 (late fifteenth/early sixteenth century).

329 Bibliotheek der Rijksuniversitet, MS. voss. lat. quarto. 79.
now in the Morgan Library in New York [fig. 125],\textsuperscript{330} illustrations of the various constellations were eventually added to the poem to enrich the descriptions. Moreover, the profusion of printed editions demonstrates the continued popularity of the poem into the age of the printing press and beyond.\textsuperscript{331}

Seated on the southern wall, Aratus is represented as a young man with blonde hair and beard [fig. 126]. There is little contemporary imagery with which to compare the figure. The poet appears in the upper left corner of Dürer’s 1515 map of the northern constellations [fig. 66], but is reduced to a schematized illustration. Moreover, in a late sixteenth-century Cremonese drawing of two figures with a celestial globe, there is a book with “ARATVS” inscribed on the binding, but it is unlikely that either of the figures represents Aratus himself [fig. 127]. Given the lack of examples, Sabatini instead followed the established tradition for depicting poets and crowns his figure with a laurel wreath.

Aratus wears a pale cloak strapped across his chest and looks to the right, to his neighbor Anaximenes. Below his left thigh rests a terrestrial globe, on which Europe and especially Italy are clearly highlighted [fig. 128]. His right foot is propped on a closed red leather-bound book with gold trim and bindings, and he holds a large compass in his left hand while supporting a dark stone tablet with his right arm. To the right of the globe sits an open book with a semi-circle and six signs of the zodiac—Libra, Virgo, Leo, Cancer, Gemini, Taurus, and Aries—in reverse order drawn inside. Although much of the text on this page is illegible, the second to last line appears to read “Canon horoscopus,”

\textsuperscript{330} M. 389 Latin MS.
\textsuperscript{331} Examples within the Vatican Library include editions from Paris, 1540 (Latin and Greek); Paris, 1559 (Greek); Paris, 1559 (Latin); and Paris, 1559 (Latin).
exemplifying the astrological nature of the book, and suggesting that it represents the poetry of Aratus himself.\footnote{My thanks to Darrelyn Gunzburg for her assistance with this observation.}

PTOLOMAE (c. 100 – c. 170 AD), Greco-Roman astrologer/astonomer and geographer

Little is known about the life and education of Ptolemy, but his full name, Claudius Ptolemaeus suggests Greek descent as well as Roman citizenship although he lived most of his life and made all of his astronomical observations in Alexandria.\footnote{For the etymology of his name see G.J. Toomer, “Ptolemy,” in Dictionary of Scientific Biography, vol. 11, 187.} He was a prolific writer and many of his works survive, including the Almagest, a thirteen-volume encyclopedia of astronomy; the Geography (alternately entitled Cosmographia), a guide to terrestrial map-making in eight books; the Tetrabiblos, an astrological treatise; the Handy Tables, a review of the charts from both the Almagest and Tetrabiblos; the Planetary Hypotheses, a summary of the results of the Almagest; the Phases of the Fixed Stars, a calendar of the risings and settings of the stars; the Planisphaerium, with detailed descriptions of cartographic projection methods; the Harmonica, a three-volume work on music theory; and the Optics, his treatise on optical theory in five books. Of these, he is best remembered for the Almagest and the Geography, both of which remained the authority in their respective fields for fourteen centuries.\footnote{For a brief introduction to the continuous popularity of the Almagest and Geography, see George Sarton, Ancient Science and Modern Civilization (London: Edward Arnold Publishers Ltd., 1954), 41.}

His earliest work, the Almagest, solidified his reputation as a mathematician and astronomer. The title comes from the Latin translation of the Arabic name al-majisti; the original Greek title translates roughly to “Mathematical Synthesis” and demonstrates that astronomy in the ancient world was mathematical rather than philosophical.\footnote{For the Greek and Arabic titles see Sarton 1954, 43, 64; Swerdlow, 144; and Toomer, 144.} Ptolemy relies heavily on the earlier observations of Hipparachus, but unlike his predecessor he writes...
The Almagest covers such topics as the movement of the stars, from which to calculate the hours of the day, as well as solar, lunar, and planetary theory. There is also a catalogue of the brightest 1028 stars, with the coordinates and magnitude of each included, as well as the description and location of forty-eight independent constellations, henceforth known as the Ptolemaic constellations. It is perhaps Book I of the Almagest, however, that is the most historically significant, given the inclusion of Ptolemy’s theory of a geocentric universe with a fixed and central Earth encompassed by the spheres of the Moon, Mercury, Venus, the Sun, Mars, Jupiter, Saturn, and the fixed stars that regularly and predictably rotate around. It is this theory that Aristotle endorsed and promoted and that subsequently became astronomical dogma in the western world until the late sixteenth century when Copernicus’ heliocentric model and Tycho Brahe’s independent observations questioned and disproved many of Ptolemy’s basic principles.

The first, anonymous, translation of the Almagest from Greek into Latin appeared in Sicily in c. 1160, but it was the 1175 Latin translation from the Arabic by Gerard of Cremona that quickly became the universally circulated edition in the west. The first printed edition, from Venice in 1515, is a copy of this 1175 translation.

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336 See Sarton 1954, 47; and Toomer, 188.
337 For the 1160 translation see Sarton 1954, 66; and Swerdlow 1993, 145. For Gerard of Cremona see Sarton 1954, 47; and Toomer, 202. The Vatican Library contains a selection of manuscript editions of the Almagest, in both Greek and Latin, including Vat. gr. 1594 (ninth century); Vat. lat. 2057 (a thirteenth-century copy of the 1175 translation); and Vat. lat. 2056 (late thirteenth/early fourteenth century). Swerdlow 1993, 149 notes that Nicholas V was unhappy with existing translations of the Almagest and therefore commissioned George Trebizond to make a new translation and commentary from the Greek in 1451 (Vat. Lat. 2058).
338 Gregory XIII would have been familiar with this printed edition, as a copy survives in the Vatican Library. A 1528 edition, also from Venice and translated by George of Trebizond is also held in the library.
Ptolemy wrote his other major work, the *Geography*, in eight books.\(^{339}\) Like the *Almagest*, it was a compilation and improvement on earlier authors, including the Greek mathematician Eratosthenes (c. 276 – c. 195 BC), Hipparachus, and the Greek geographer, cartographer, and mathematician Marinus of Tyre (c. 70 – 130 AD).\(^{340}\) The treatise was Ptolemy’s attempt to map the known world, but because the Roman Empire was the best-known territory at the time, the coordinates for that geographical area are the only to exhibit any accuracy.\(^{341}\) George Sarton further elaborates on the considerable inaccuracies of the work, noting that many of Ptolemy’s coordinates were based on anecdotal knowledge.\(^{342}\)

The *Geography*’s legacy comes not from its erroneous lists of meridian lines, but from the detailed instructions in Book I for the creation of accurate two-dimensional maps. Ptolemy carefully describes how to construct and reconstruct maps, so as to prevent corruption in copying, and by so doing establishes a clear method for terrestrial cartography. These advancements in projection became an essential tool for Early Modern map-making, and the majority of fifteenth- and sixteenth-century cartographic publications developed out of these techniques.\(^{343}\)

The *Geography* was rediscovered in the west about 1406 when the Humanist Giacomo d’Angelo brought a Greek manuscript of the text to Italy from Constantinople and subsequently translated it into Latin.\(^{344}\) Laura Federzoni notes that the rediscovery of

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\(^{339}\) As with all of his work there is no firm date for the treatise, but Sarton 1954, 50, suggests a date after 150 AD.

\(^{340}\) For more on these figures see Sarton 1954, 50; and Toomer, 198.

\(^{341}\) See Toomer, 200.

\(^{342}\) Sarton 1954, 52.

\(^{343}\) Toomer, 202.

\(^{344}\) Sarton 1954, 68; Toomer, 202. Laura Federzoni notes that it was actually Giacomo’s mentor, the Byzantine monk Emmanuel Chrysoloras, who brought the text to Florence from Constantinople, but that the Latin translation is largely credited to Giacomo. See “The *Geographia* of Ptolemy between the Middle Ages, the Renaissance,” in *Aufsicht – Ansicht – Einsicht: Neue Perspektiven auf die Kartographie an der Schwelle zur Frühen Neuzeit*, ed. Tanja Michalsky, Felicitas Schmieder, and Gisela Engel (Berlin: Trafo, 2009), 93.
Ptolemy’s text hailed the beginning of the geographic Renaissance, when cartographers strove for factual reality rather than medieval allegorical views of the world.\textsuperscript{345}

The first printed edition of d’Angelo’s translation dates to 1475 in Venice, and the number of surviving editions from the sixteenth century testifies to its popularity in the early modern world.\textsuperscript{346} Although it is likely that Ptolemy’s original text included cartographic illustrations, the earliest surviving manuscripts with maps date to the thirteenth century, and therefore these representations must be medieval reconstructions based on the instructions within the text.\textsuperscript{347} A beautiful example of the intricacy and detail of these maps comes from the Vatican Library MS. Vat. lat. 3811, dating to c. 1470 [fig. 129].\textsuperscript{348}

Although one could argue that all of Ptolemy’s treatises were of interest to Gregory XIII, the \textit{Planisphaerium} is the last of the astronomer’s oeuvre that seems to be directly related to the frescoes in the Sala Bologna. Its title can be roughly translated to “celestial plane” or “star chart,” and the text elaborates on the projection methods first outlined in the \textit{Geography}, and how to translate the three-dimensional celestial sphere onto a two-dimensional surface. The latter was a problem that Vanosino and Sabatini were themselves faced with in the decoration of the ceiling. Given that many editions of the text included a celestial map of the forty-eight Ptolemaic constellations, for example that printed in Basel in 1541 [fig. 130], it is possible that Vanosino used the \textit{Planisphaerium} as a reference or guide as he created his own representation of the heavens. The original Greek of the \textit{Planisphaerium} is lost, but the

\textsuperscript{345} Federzoni, 93.
\textsuperscript{346} Federzoni, 95, n. 7 lists the number of manuscripts known (fifty-three), as well as the printed editions: seven from the fifteenth century, thirty-two from the sixteenth century, and ten from the seventeenth and eighteenth centuries. The number of copies produced in Early Modern Europe demonstrates the text’s ubiquity. The Vatican Library holds several early copies of the \textit{Geography}, including a first edition from Venice, 1475, as well as printings from Rome, 1478 (d’Angelo’s translation, with twenty-seven illustrated maps); Rome, 1490 (d’Angelo’s translation, with twenty-seven illustrated maps); and Venice, 1574 (translated into Italian by Giovanni Malombra).
\textsuperscript{347} Sarton 1954, 53.
\textsuperscript{348} Other manuscripts in the BAV include Urb. gr. 83; Vat. lat. 3810 and Vat. lat. 3811, both of which date to c. 1470 and are based on d’Angelo’s Latin translation.
medieval astronomer and mathematician Hermann of Carinthia translated the text into Latin from the Arabic in 1143. Just three years before the commission of the Sala Bologna the text was translated into Italian.

In contrast to the other historical figures represented in the Sala Bologna, depictions of Ptolemy appear variously throughout the history of art, providing Sabatini with a selection of imagery from which to draw upon for possible inspiration. For the portrait series in Duke Federico da Montefeltro’s *studiolo* in the Palazzo Ducale in Urbino, Joos van Gent painted the astronomer as an elderly man holding an armillary sphere and dressed in jeweled robes with a turban and crown [fig. 131]. In the corner of Dürer’s celestial map of 1515 Ptolemy measures a globe of stars with a compass [fig. 66]. In the Sala del Senato of the Doge’s Palace, 1575-1595, Palma Giovane painted a younger man with an eastern-style headdress and armillary sphere [fig. 132]. In a series of grisailles attributed to Girolamo Mocetto in the late fifteenth/early sixteenth century, Ptolemy has a full beard and holds an armillary sphere [fig. 133]. Finally, in Veronese’s *Allegory of Navigation with an Astrolabe*: Ptolemy painted in 1557, the astronomer has a white beard, wears billowing drapery and a white turban, and holds an astrolabe while standing in front of classical ruins [fig. 134].

Sabatini would have also been familiar with the various figures depicted in the *School of Athens*. Raphael, however, confuses the astronomer with the Ptolemaic kings of Egypt in his illustration of a crowned figure [fig. 135]. Sabatini avoids this error and seems to have followed the established iconographic tradition as seen in the work of van Gent, Veronese, and Mocetto, by demonstrating Ptolemy’s Egyptian heritage with a turban of white cloth [fig.

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349 Toomer, 198.
350 The Vatican does not hold a copy of the Italian edition, but has a printing from Venice in 1558, translated into the Latin by Federici Commandino.
351 Several depictions of Ptolemy exist in the art of northern Europe, but unlike Dürer’s map that was widely circulating at the time of the Sala Bologna, it is unlikely that Sabatini would have been familiar with these examples.
Elderly man with white hair and beard, the astronomer in the Sala Bologna wears a multi-colored shirt and pants with robes and Roman sandals. With one leg crossed over the other, he gazes directly upwards and holds a triquetrum with sighting points in his left hand. First mentioned in the twelfth volume of the Almagest, the instrument is his own invention and was used to calculate the angular elevation of heavenly bodies more accurately than the astrolabe.

**MANILIVS ROM (flourished early first century AD), Roman astrologer and poet**

We know little of the Roman astrologer and poet Marcus Manilius, but his poem, the Astronomicon libri V, is accepted as the oldest treatise on Roman astrology. The dating of the work is confirmed in the text itself, with a dedication to Augustus written in the present tense and therefore indicating that the emperor was alive at the time of writing.\(^{352}\) In the Natural History, Pliny refers to a Manilius Antiochus, an astronomer and cousin to Publilius Lochius, but G. P. Goold notes the discrepancies in dating between this man and the dating of the Astronomicon.\(^{353}\) Additionally, although the name “Boenius” appears in a medieval manuscript of the poem, both Goold and David Pingree have noted that this is an error in confusion with the sixth-century philosopher Anicius Manlius Boethius.\(^{354}\)

The poem includes information on all aspects of the heavens, beginning with the celestial spheres, the constellations, and comets in Book I. Similar to Aratus’ earlier work,
Manilius establishes a universe that is neat and orderly, and controlled by a divine being.\textsuperscript{355} In Book II, the zodiacal constellations are described, and detailed instructions for the construction of a horoscope are outlined in Book III. The third book is particularly noteworthy for the first explanation of the horoscopic system of houses, or \textit{Templa}, and how each rules over a different aspect of one’s life. The decans are discussed in Book IV, and Book V, although incomplete, contains a discussion of the fixed stars.

The first reference to Manilius and his poem comes from a letter in 988 by Gerbert d’Aurillac, the future Pope Sylvester II (c. 946 – 1003) who writes to the Bobbio monastery for a copy of “M. Manlius de astrologia.”\textsuperscript{356} The \textit{Astronomicon} is not mentioned again until 1417 when Poggio Bracciolini rediscovers a manuscript of the work in Constance while in the area for the Council of Constance in 1416/1417.\textsuperscript{357} The German astrologer/astronomer Regiomontanus (1436 – 1476) was the first to make a commentary and publish the text in Nuremberg in 1473, and from there the treatise spread in popularity.\textsuperscript{358} Printed examples within the Vatican Library include editions from 1510, 1551, and 1566.

Sabatini envisions Manilius as an elderly man with long white hair and dressed in a golden toga fastened on his right shoulder [fig. 137]. Like Aratus, the poet is represented in Dürer’s 1515 map of the heavens [fig. 66], and the name “G. Manilius” appears on the binding of a book in the late sixteenth-century Cremonese drawing of two figures with a globe mentioned above [fig. 127]. Beccafumi depicts a young man with blonde hair and dressed in red and yellow robes in his \textit{Fall of Marcus Manilius} of the 1530s in the Sala del Concistoro, Palazzo Pubblico, Siena [fig. 138].

\textsuperscript{355} Manilius, I.247-254. See also Volk, 251-252. Volk lists a thorough outline of the poem’s contents on pages 266-270.
\textsuperscript{356} Goold, cviii; and Volk, 1.
\textsuperscript{357} Volk, 2.
\textsuperscript{358} For Regiomontanus’ commentary, see Volk, 2.
In the Sala Bologna, Manilius holds open a book with his right hand, and his left hand props up a stone tablet inscribed with a horoscopic chart [fig. 139]. In order to be seen clearly from below, the chart is schematized and simplified; for example there are no angles or degrees marked. A few of the symbols are enigmatic in their representation, but their arrangement on the chart is significant as they indicate the natal horoscope of the Boncompagni pope.

Marc’Antonio Ciappi records Ugo Boncompagni’s birth at approximately two hours into the night on January 7, 1502. Based on the sunset in Bologna on this date at approximately 4:53 pm, Ugo’s birth can be calculated to 6:53 pm. This yields an Ascendant sign of Leo, as seen in Ugo’s natal chart in Appendix 5 but not in the horoscopic tablet held by Manilius, which presents instead an Ascendant sign of Aquarius. When this tablet is flipped, however, it matches Ugo’s natal chart exactly [figs. 140, 141]. The circle of the Leonine glyph is now positioned in the first house between a capital letter A for Ascendant. Although unusual, the inclusion of the letter A is not unprecedented and can be seen, for example, in the fifteenth-century illustration of an astrologer painted on the south wall of the Palazzo Ragione in Padua [fig. 142]. In the second house of Manilius’ flipped chart is the glyph of Virgo depicted on its side to allow room for a circle representing the Lot of Fortune. Following this is Libra in the third house and Scorpio in the fourth. The straight line in the fifth house indicates Sagittarius, and the curled half-circle just above it represents the Moon. In the sixth house the glyph of Capricorn is combined with a circle.

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360 For the following calculations, references, and hypotheses I am indebted to Darrelyn Gunzburg.
361 For the Lot of Fortune and its significance within natal charts see Manilius, III.160-202.
362 For the representation of the Moon as a half-circle, see Avraham Ben Meir ibn Ezra, The Beginning of Wisdom, ed. Robert Hand, trans. Meira B. Epstein (Reston: ARHAT Publications, 1998), 104. Similar iconography is also found in the Palazzo Ragione example.
representing the Sun. The remaining signs following in correct order are: Aquarius in the seventh house, Pisces in the eighth, Aries in the ninth, Taurus in the tenth, Gemini in the eleventh, and Cancer in the twelfth.

There are no such precedents for the display of a flipped chart that I am aware of, and Manilius does not mention anything on the topic. The answer to this unusual iconography is therefore found only when considered within the context of the Sala Bologna itself. As previously discussed, we know that Gregory used the room to dine and entertain prestigious guests. Although the cartographic and allegoric decoration would be pleasing to the eye of any visitor, the propagandistic messages inherent in the iconography would only be understood those of a high intellect. Filling the Boncompagni papal court were many of the brightest thinkers of the age and it is this type of guest that would most likely enjoy a meeting with the pope in the Sala Bologna. The addition of an intellectual puzzle to the room’s iconography adds further entertainment and provides an additional conversation piece. The natal chart held by Manilius was therefore flipped in its representation so as to entertain erudite guests and flatter their intellect as they mentally reversed the chart and discovered its true meaning.

ALPHONSVS REX (1221 – 1284 AD; reign 1252 – 1284), King of Castile, patron of astrology

The last figure in Mascherino’s loggia is also the latest chronologically. Son of Ferdinand III and Elisabeth of Hohenstaufen (known in Castilian as Beatriz de Suabia), and cousin to Holy Roman Emperor Frederick II, Alfonso became king of Castile and León in 1252. Famous for his patronage of astronomy and Ptolemaic cosmology, he earned the nicknames “the wise,” “the learned” (el sabio), and “the astrologer.”

363 For the representation of the Sun as a small circle with a tail, see ibn Ezra, 99, 100, n. 1. Similar iconography is also found in the Palazzo Ragione example.
During his reign the king directed the publication and translation of several works from Arabic into Castilian, including the *Libros del saber de astronomía* ("Books of Wisdom of Astronomy"), a revision of Ptolemy with a star catalog and extensive commentary on various astronomical instruments; the *Libro de los juicios de las estrellas* ("Book of Judgments of Astrology"), the astrological companion to his astronomical treatise; the *Lapidario*, a medicinal handbook; the *Siete partidas* ("Seven Divisions"), a treatise on Roman law; and the *Cantigas* ("Canticles of Holy Mary"), a richly illustrated book of poetry and music. Alfonso’s use of the Castilian language made him a promoter of science in the vernacular, but unfortunately limited the universality of the works produced by his court. As Evelyn Procter notes, the king likely played no role in the subsequent translation of these works from Castilian into Latin.364

His best-known work is the *Tablas alfonsies*, or the *Alfonsine Tables*, a translated and expanded version of the tables produced almost two centuries earlier by the Islamic astronomer Abu Ishaq Ibrahim al-Zarqali (c. 1029 – c. 1087).365 The majority of the text is dedicated to an extensive charting of the movements of the Sun, the Moon, and the planets in relation to the fixed stars, beginning on the date of Alfonso’s coronation, January 1, 1252. In addition to al-Zarqali’s original work, new stellar observations made between 1262 and 1272 were included.366 Largely compiled by two Jewish astronomers of Alfonso’s court, Isaac ben Sid and Jehuda ben Moses Cohen, the treatise also describes the methodology behind the listed calculations and includes a discussion on eclipses and retrograde motion. A

significant section is also devoted to the astrological impact of these movements, demonstrating that the two celestial sciences were still believed to be complementary in the thirteenth century.

Between the writing of the Alfonsine Tables and their eventual publication, the text underwent several changes. Most significant was the reorganization by one John of Lignières in Paris in the early 1320s. It is this version in Latin, and not the original Castilian from Toledo, that became ubiquitous throughout the western world, and provided the basis for the first printed edition in Venice in 1483. Given that Early Modern astronomy was almost exclusively mathematical in practice, such charts were fundamental to the work of any practitioner, and the Alfonsine Tables remained the definitive charts in Europe until the German astronomer Johannes Kepler produced his own Rudolphine Tables in 1627.

Alfonso is envisioned in the Vatican as a bearded, middle-aged man, clothed in multi-colored robes that billow out behind him [fig. 143]. He wears a golden crown and holds a golden scepter with his right hand, and also supports a stone plaque inscribed with what is likely an excerpt from the Alfonsine Tables [fig. 144]. The zodiacal glyphs here form a boustrophedon pattern, beginning with Aries, and followed by Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius, and Pisces. Next to the zodiac symbols on the right are two vertical columns of numbers headed by the letters G and M, referring to a star’s longitude in terms of degree (grado) and minute (minuto), following the standard charting.

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368 Chabás 2007, 269. The Vatican Library does not have a printed edition of the Alfonsine Tables but holds a manuscript (Urb. lat. 268) dating to 1424 and compiled by the Paduan astronomer Prosdocimo de’Beldomandi (d. 1428), on which see Chabás 2007, passim.
369 Noel Swerdlow has argued that Gregory based his reform of the calendar on the length of the tropical year as listed in the Alfonsine Tables, but as other scholars have shown, this hypothesis is questionable. See “The Origin of the Gregorian Civil Calendar,” *Journal for the History of Astronomy* 5 (1974): 48-49.
method. For example, in the Paduan astronomer Prosdocimo de’ Beldomandi’s 1424 revision of the Alfonsine Tables, *Tabulae Mediorum Motum Equatiorum*, each star’s location is listed in signs, degrees, and minutes.\textsuperscript{370}

To the right of the king is a blonde woman dressed in pink gowns and wearing a golden crown. On the ledge to the right of the two figures is a book bound in green leather with red-tinted pages and the name “Elisabeth” inscribed on the edges. This name provides the identity of the woman as Alfonso’s mother, Elisabeth of Hohenstaufen (1203 – 1235).\textsuperscript{371} As a young woman she was the ward of King Frederick of Sicily (later Holy Roman Emperor Frederick II). To his court Frederick brought the Scottish astrologer Michael Scot (1175 – 1232), who is best remembered for his astrological text the *Liber introductorius* in which the attributes and personalities of the planetary gods are described for the first time. While at court the young Elisabeth was surely exposed to astrological theory and practice, and perhaps it was she who inspired like-minded thinking in her eldest son.

**Reasons for Inclusion**

Previous research has provided little to explain the inclusion of these various figures. If, as has been suggested by Fiorani, the intention was only to illustrate the various sciences needed for map-making, then a few notable individuals are inexplicably missing, particularly Euclid.\textsuperscript{372} Further, the mythical gods are unexpected and out of place. Carlo Pietrangeli and Kristen Lippincott both hypothesize that these personalities refer to those who aided in the reformation of the calendar is likewise problematic, as this reformation was initiated after the

\textsuperscript{370} BAV MS. Urb. lat. 268, ff. 28r-33v.
\textsuperscript{371} There are no other notable Elisabeth’s in Alfonso’s life. Little is written about Elisabeth other than basic biographical facts and family history. It was through his mother’s family and German heritage that Alfonso based his claim to the seat of the Holy Roman Emperor.
\textsuperscript{372} Fiorani, 149.
completion of the room’s decoration. The answer behind the selection of these individuals, therefore, can be understood only when the group is considered as a whole and within the context of the decoration of the entire room. The ten figures represent a compilation of each of the founders or inventors of western astrology/astronomy and geography, as well as a few of these sciences’ most famous practitioners. In other words, with this mix of mythical, biblical, and historical figures, Sabatini has painted not a mere allegorical representation or celebration, but a unique and complete visual history of these disciplines from antiquity into the Middle Ages.

Isis and Theut, as the Egyptian Queen of Heaven and inventor of astronomy respectively, begin the history of the celestial sciences, representing its oldest mythical origins. Atlas carries this tradition into the classical world, and Seth into the biblical era. The remaining six personalities constitute a representation of key figures from the Greco-Roman world to Medieval Spain, from whom we have the earliest records of this science. In addition, this combination of astrological and astronomical imagery demonstrates how the two branches of learning were seen as one and the same in antiquity and into Gregory XIII’s own day. Theut, Atlas, Seth, and Ptolemy also represent the lineage of knowledge of cartography and geography, from ancient Egypt into the Latin West. Altogether, these figures and, more significantly, the history they represent, connect thematically the terrestrial maps on the walls with the celestial map on the ceiling, and unify the overall decorative program of the room.

373 Lippincott 1990A, 206; and Pietrangeli 1996, 277. The reformatory committee was not assembled until late 1575, and the revised calendar itself was not inducted until significantly after the ceiling’s decoration, in 1583. Further, if an allusion to the calendar was intended, a likely inclusion in the ceiling’s iconography would be the depiction of the Sun on the vernal equinox (where the ecliptic crosses the celestial equator). This display would be representative of the new calendar in its allusion to the newly fixed date of Easter—the original purpose of Gregory’s revision—to the day of the first full moon after the vernal equinox.
Furthermore, the way the mythical figures of Theut, Atlas, and Isis are depicted is significant, especially when compared to the similarly located frieze of mythological narratives in the Sala del Mappamondo at Caprarola. The portrayal of the Egyptian and Greco-Roman gods as naturalistic di sotto in su figures gives emphasis to the historical figure instead of their mythological legends. As Jean Seznec explains, the Renaissance Euhemerists believed that the classical gods were actual historical personalities, as a way to rationalize and accept them within a Christian context.\(^{374}\) For example, given his support of the sky, the Euhemerists transformed Atlas into an astrologer, and indeed, Sabatini paints the god in the Sala Bologna next to an armillary sphere instead of supporting the heavens.

The representations of the Egyptian Theut and Isis similarly follow this notion. In contrast to ancient iconography, Theut is shown as a young man seated next to an ibis instead of with the head of the sacred bird.\(^{375}\) Similarly, Isis is not crowned with the crescent moon, but instead appears as any contemporary noblewoman. Such a break from the traditional representation of these two figures is not a result of the lack of traditional iconographic examples, as there was a profusion of both literary descriptions and pictorial examples available at the time, but instead it must be considered a conscious choice to emphasize their historical personality rather than their mythological features.\(^{376}\)

\(^{374}\) Seznec, 204. See also, Allen, D., 72.

\(^{375}\) Moreover, the use of the Greek spelling “Theut” links the god more closely with the historical Hermes Trismegistus.

\(^{376}\) The Mensa Isisca or Bembine Tablet of Isis, discovered c. 1520 and purchased by Cardinal Bembo and published by Enea Vico de Parma in 1559, contains representations of both Theut and Isis in their more traditional iconographic guises. See Curl, 58. For a listing of Renaissance sketches and publications of Egyptian remains, see Curl, 60.
Part IV: The Quadratura

Quadratura in Bologna

Designed by Mascherino and painted by Sabatini and his workshop, the Sala Bologna’s perspectival loggia exemplifies the Bolognese specialty of quadratura painting in Rome. Bologna was the center of this art in the sixteenth century, as the University of Bologna was known for its scholars specializing in perspective, mathematics, and architecture, the three components of this illusionistic technique. Moreover, the architect Giacomo Barozzi da Vignola (1507 – 1573), the lead perspective theorist of the time, spent much of his life in Bologna, and influenced the great quadratura specialists Pellegrino Tibaldi (1527 – 1596), Tommaso Laureti (1530 – 1602), and Mascherino himself. Vignola was also a painter and employed his mastery of perspective in designing and painting the Sala Tondo at the Palazzo Farnese at Caprarola (1559 – 1594). Vignola is best known in this particular field, however, for his treatise Le due regole della prospettiva pratica, published posthumously in 1583 with extensive commentary by Egnazio Danti. Given Danti’s citation of Tibaldi’s work at the Palazzo Poggi (1550s) and Laureti’s frescoes in the Palazzo Vizzani (1560s), both of which follow the principles outlined in Vignola’s treatise, Ingrid Sjöström has convincingly argued that Vignola developed the foundations of this work as early as the 1530s.

377 See Knall-Brskovsky, 36; Pigozzi, 22-30; and Ingrid Sjöström, Quadratura: Studies in Italian Ceiling Painting (Stockholm: Almquist & Wiksell, 1978), 81, 88. The University of Bologna and its academic program is discussed in detail in Chapter 3.
378 For Vignola see Kemp, 71; Schulz 1961, 98; and Sjöström, 41-42.
379 For Tibaldi’s quadratura in Bologna see Kiefer, passim; McTavish, 186-188; and Roberto Terra, “Domenico Tibaldi,” in La Sala Bologna nei Palazzi Vaticani, 176-178.
381 For the Sala Tondo see Knall-Brskovsky, 36; Schulz 1961, 98, n.33; and Sjöström, 41.
382 Sjöström, 41.
The earliest example of quadratura painting in Bologna is Tibaldi’s work in the Sala d’Ulisse and the Sala di Fetonte, both in the Palazzo Poggi and executed in the 1550s for Giovanni Poggi, bishop of Tropea. These frescoes were Tibaldi’s first major Bolognese commissions and they reflect his time spent in Rome between 1550-1552 where he studied and was influenced by the quadratura and quadri riportati of Raphael’s Loggia (1516 – 1519). Following Raphael’s compositional example, Tibaldi uses four scenes painted in partial quadri riportati to display the main narrative on the ceiling of the Sala d’Ulisse, in this case the story of Odysseus [fig. 61]. At the same time he demonstrates his sophisticated knowledge of perspective gained by studying Raphael and paints six sets of illusionistic paired columns in each of the four corners of the ceiling that visually extend the height of the ceiling and open it up to a painted sky [figs. 145, 62]. Departing from Raphael’s example is Tibaldi’s inclusion of four figures painted di sotto in su, each of which balances precariously atop the columns in the corners.

The quadratura in the Sala di Fetonte demonstrates a more advanced understanding of visual perspective, and thus scholars have argued a later date for this ceiling fresco. It also reflects Tibaldi’s growing knowledge of Vignola’s perspectival theories [fig. 146]. Here Tibaldi employs a dramatic two-story balustrade that ascends sharply into the ceiling towards a central vanishing point.

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383 Morten Steen Hansen, “The Art of Hubris: Pellegrino Tibaldi in the Papal States,” (PhD diss., Johns Hopkins University, 2002), 9; Schulz 1961, 98; and Sjöström, 44. For the dating of the frescoes, Hansen, 58, argues that they were executed prior to 1551 based on the absence of cardinal symbols in the coats of arms in the rooms. The Palazzo Poggi is now the Palazzo dell’Università.


385 Baltay, 61; Schulz 1961, 98; Sjöström, 44. The ceiling frescoes of the Sala di Fetonte are badly damaged, and the central scene is all but indecipherable. See Hansen, 58, n. 101.
Although it is no longer extant, an engraving included in Danti’s commentary on Vignola reproduces the other great example of early Bolognese quadratura, that of the ceiling fresco in the Sala Senatoria in the Palazzo Vizzani painted by Laureti c. 1562 [fig. 147].

Like Tibaldi, Laureti was greatly influenced by Vignola, and Danti praises the Sala Senatoria in his commentary, noting its practical solution for the rules of mathematical perspective. Here Laureti paints uniform sail vaults fronted by an arcade springing from Corinthian columns that are situated atop an ornate balustrade. The bottom of the balustrade is intricately decorated with lion’s heads and garlands between pairs of volutes. Unlike Tibaldi and Raphael, both of whom use quadratura to extend the actual architecture of the room into a fictive opening of blue sky, Laureti paints an isolated architectural space that exists between the walls of the room and the illusionistically open ceiling [fig. 148].

**Quadratura in the Sala Bologna**

The commission of Bolognese artists to design (Mascherino) and paint (Sabatini) quadratura in the Sala Bologna is appropriate given the room’s overall theme as a celebration of the Boncompagni pope’s city of origin. Mascherino designed an open loggia with paired composite columns in white, purple, and green marble that support ten polychrome marble arches bordered by trompe l’œil gilded stucco [figs. 149, 150].

Decorating each corner is a series of repeated grotteschi, including two flying birds, a winged face, and a sphinx atop a pedestal. Each of the ten niches opens to the sky above a bronze pergola interlaced with

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386 Berselli, 38; Danti, 87; Knall-Brskovsky, 39; Pigozzi, 16; Schulz 1961, 98.
387 Danti, 87.
388 As Sjöström, 43, notes, the ratio of the ceiling is 2:3 with a central vanishing point, and therefore pergolas block the view of the open sky behind each seated figure on the long sides of the rooms.
389 The sphinx here takes on the form often used in ancient Greece, with a female head and breasts, used to demonstrate wisdom. See Hall 2008, 297-298.
various types of birds and small animals. Four different types of vegetation inhabit the loggia, including laurel, depicted with oval leaves and large round and white flowers. The laurel here represents poetry and triumph, and therefore corresponds in meaning to its placement above Theut, Manilius, and Aratus. Roses, seen here with pointed oval leaves and red flowers, decorate the rods above Seth, Anaximenes, and Isis. The link between roses and the Virgin Mary provides meaning into their placement above the Egyptian goddess of the heavens. Convolvulus, with its heart-shaped leaves and round white flowers, intertwine in the atriums above Thales, Isis, Atlas, Alfonso, and Ptolemy, and signifies peace. Finally, representing peace again is the olive, with its long and skinny leaves and white flowers, and located above Ptolemy, Alfonso, Atlas, and Thales.

Together these four types of vegetation representing triumph, humility, peace, and the Catholic Church (in the embodiment of the Virgin Mary), reflect the nature and mottos of Gregory XIII, as also reflected in the emblematic friezes located in the four corners of the room.

The rich coloring of the fictive architecture, seen in the composite columns as well as the arches above, also bears significance. The use of colored marbles is a key component of the so-called Paleo-Christian movement that began in the sixteenth century under Gregory himself. Beginning with the Boncompagni pope’s Cappella Gregoriana in St.

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390 Above Seth there appears a small white dog as well as a finch or sparrow and a pheasant or quail. Above Anaximenes is a duck and goose, and above Aratus are three swallows. My thanks to Sarah Cantor for her help with these identifications.


392 For roses see D’Ancona, 330-355; and Hall 1994, 157.

393 For convolvulus see D’Ancona, 108-111; and Hall 1994, 144.

394 For the olive see D’Ancona, 261-271; and Hall 1994, 152.

395 My thanks to Jasmine Cloud for her collaboration on the following ideas. Various colored marbling is also seen in the pavement of the room.

Peter’s, and followed by others, including Sixtus V’s Sistine Chapel in Santa Maria Maggiore, such colorful ornamentation was intended to suggest a celestial paradise, and it finds no comparison except within the early Christian churches. The Gregorian and Sistine chapels evoke the decoration of such early churches as Santa Costanza and Santi Cosma e Damiano in an attempt to reference the “purity” of the early Church, considered at the time to be the golden age of Christianity. As Nicola Courtright notes, this idea of a “golden age” was regularly mentioned in the Council of Trent proceedings, by such notable reformers as Carlo Borromeo and Filippo Neri.397

The nature of Gregory’s pontificate in Post-Tridentine Rome was one of reform, and this can be seen in all aspects of his pontificate, including his artistic commissions. As Courtright has argued, by using early Christian decorative techniques, the Boncompagni pope was able to demonstrate his legitimacy as well as the goals of his papacy, such as restoring the Church to its former glory.398 The depiction of colored marble in the iconographic program of the Sala Bologna provides a clear and recognizable link to this goal.

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397 Courtright 2003, 20.
398 Courtright 2003, 98.
Chapter 3: Religion, Science, and Gregory XIII: The Decorative Program of the Sala Bologna

In contrast to Gregory XIII’s other cartographic commissions in the Vatican Palace, including the Terza Loggia (1580) and the later Galleria delle Carte Geografiche (1580-1581), the decoration in the Sala Bologna is unique in that only a single region is depicted.

Frescoed on the western wall of the room is the expansive Bolognese countryside bordered by the allegories of Annona (grain harvest) and Pacis [fig. 8]. On the south wall is a city view of Bologna flanked by two scenes from Church history, Gregory IX Delivering to the Bolognese Doctors the Codex of the Decretals, and Boniface VIII Delivering to the Bolognese Doctors the Sixth Book of the Decretals [fig. 7]. A third representation of Bologna, seen in perspective, appears above the allegory of Bononia on the northern wall [fig. 9]. The eastern wall is in ruinous condition, and only the allegory of Securitas is still identifiable [fig. 10].

A multitude of studies have been published on these terrestrial maps, including the recent 2011 La Sala Bologna nei Palazzi Vaticani: Architettura, cartografia e potere nell’età di Gregorio XIII.\(^{399}\) Given the arc of recent scholarship, this chapter will not provide another in-depth

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analysis of the wall frescoes, but will instead demonstrate how the iconography of the lower walls interacts with that of the vault. I will describe each wall and its commission, but only in service of this larger contextual argument. Because the decorative program of the Sala Bologna as a whole has yet to be fully explored, the second half of this chapter will focus on the sixteenth-century viewer’s “reading” of the space, and the meaning of the room’s iconography when considered as a single unit.

Part I: Maps, Allegories, and Emblems: The Wall Frescoes

Before discussing the decoration of the walls, a brief mention of the Sala Bologna’s marble pavement will be useful for understanding the overall commission. As Sambin de Norcen has shown, payments for the construction of the floor made to one Francesco Raggi begin on August 8, 1575 and continue through to January 17, 1576. Although little is known about the mason, he appears in the payment records for later commissions in the Cappella Gregoriana between 1578 and 1579, thus demonstrating his favor with the Boncompagni pope.

Following restorations in 1873 and 1987, the floor exists today in brilliant condition. Comprised of various colored marbles placed in opus sectile, the floor is arranged


400 Sambin de Norcen (2011D), “Pavimento: Francesco Raggi: Pavimento in opus sectile con arma papale di Gregorio XIII e iscrizione commemorativa dei lavori, 1575,” in *La Sala Bologna nei Palazzi Vaticani*, 165. Raggi was paid for the commission in four installments: August 8, 1575 (ASR, CI, TS, b. 1301, f. 12v); September 11, 1575 (ASR, CI, TS, b. 1301, f. 17v); October 15, 1575 (ASR, CI, TS, b. 1301, f. 21v); and January 17, 1576 (ASR, CI, TS, b. 1303, f. 42v).

401 See Sambin de Norcen 2011D, 165.

402 For the restorations see Sambin de Norcen 2011D, 165. Sambin de Norcen also notes how Raggi himself restored the inscription in 1577, citing a payment on October 6 of that year (ASR, CI, TS, b. 1305, f. 29v).
in a checkerboard pattern of black and white with the Boncompagni arms in the center [fig. 45]. Similar to the rich coloring found in the quadratura painted in the intrados of the vault above, as well as the stone floors commissioned by Gregory XIII in the Cappella Paolina, the Sala Regia, and his own Cappella Gregoriana, this use of polychrome marbles suggests the theme of Paleo-Christian revival.

The central imprese of Gregory XIII is bordered by a rectangular pattern of gray, orange, and white marble measuring 580 x 452 cm. Inside is the papal shield with a green and gold Boncompagni dragon stretching his wings against a deep red background. The papal tiara and keys of St. Peter are inset with marble of rich yellow and white. Surrounding the coat of arms is an inscription commemorating the commission of the room, similar to that found around the quadratura above: GREGORIUS / XIII / BONCOMPAGNUS / BONON / PONT / MAX / ANNO / IUBIL / M / D / LXXV / PONTIFICATUS / SUI / IIII (Gregory XIII, Boncompagni, Bolognese, Pontificus Maximus, year of the Jubilee, 1575, fourth year of his pontificate).

The Terrestrial Maps

The Countryside

Unlike the ceiling fresco of the Sala Bologna, for which only a scattered amount of archival evidence survives, several letters between the Bolognese ambassador in Rome Filippo Carlo Ghisillieri and the Bolognese Senate are preserved. This correspondence details the commission for the countryside fresco, as well as Pope Gregory’s personal involvement with the selection of maps and cartographers to be employed in the enterprise. In the first letter, dated February 12, 1575, the Cardinal Nephew Filippo Guastavillani tells

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403 For the floor’s measurements see Sambin de Norcen 2011D,165
the ambassador of his uncle's desire to have the territory and city of Bologna painted on the walls of his new salon.\textsuperscript{404} This letter also describes how the Bolognese civil engineer Scipione Dattari (documented in Bologna 1555 – 1564) was commissioned to create the map that would then be painted by Lorenzo Sabatini. Dattari, however, was unable to commit the time needed to produce a new survey of the countryside, and so the Senate suggested instead that he update and adjust an existing map kept among the holdings of San Pietro in Bologna.\textsuperscript{405} G.B. Comelli has proposed that the requested map was one created by the Augustine monk Cherubino Ghirardacci (1519 – 1598),\textsuperscript{406} but based on two additional ambassadorial letters, Francesco Ceccarelli has convincingly argued instead that Dattari used a map produced by the architect and painter Domenico Tibaldi (1541 – 1583).\textsuperscript{407} Tibaldi brought both the original San Pietro map and Dattari's modified version to Rome in June 1575, at which point Sabatini, after ordering further corrections, began painting the countryside with his workshop.\textsuperscript{408} Measuring 466 x 850 cm, the fresco is remarkable for its size, as well as the fact that it is the oldest surviving map of the region.\textsuperscript{409} Additionally, it surpasses all contemporary images for its geographical accuracy and comprehensiveness, with more than 650 sites labeled and identified, including the important

\textsuperscript{404} ASBo, Assunteria di confine, acque e fiumi, Lettere dell'ambasciatore Bolognese a Roma e d'altri all'Assunteria di confine, acque e fiumi, dated February 12, 1575. Comelli 1896, 158-161, was the first to publish these letters. For a transcription of the documents see Maria Teresa Sambin de Norcen (2011F), “Appendice 3,” in La Sala Bologna nei Palazzi Vaticani, 182. See also Aksamija 1955, 34-35; Ceccarelli 2011C, 124; Comelli 1914, 36-38; Sambin de Norcen 2011A, 30; and Serlupi Crescenzi 1992B, 155.

\textsuperscript{405} ASBo, Senato, serie VII, Lettere dell'ambasciatore Bolognese in Roma, vol. 50, dated March 16, 1575; ASBo, Senato, serie VII, Lettere dell'ambasciatore Bolognese in Roma, vol. 50, dated March 30, 1575. See also Aksamija 1960, 16; Almagià 1955, 34; Ceccarelli 2011A, 40; Ceccarelli 2011C, 124; Comelli 1896, 186-187; Comelli 1914, 32-33; Fiorani 2004, 181; and Sambin de Norcen 2011F, documents 4 and 7.

\textsuperscript{406} Comelli 1896, 160.

\textsuperscript{407} Ceccarelli 2011C, 124. The letters in question are ASBo, Senato, serie VII, Lettere dell'ambasciatore Bolognese in Roma, vol. 50, dated April 23, 1575; ASBo, Assunteria di confine, acque e fiumi, Lettere dell'ambasciatore Bolognese a Roma e d'altri all'Assunteria di confine, acque e fiumi, dated May 4, 1575. See also Aksamija, 47; Ceccarelli 2011A, 40; Ceccarelli 2011B, 105; Comelli 1896, 189; and Sambin de Norcen 2011F, documents 12 and 14.

\textsuperscript{408} Ceccarelli 2011A, 40; Comelli 1914, 38; Comelli 1896, 161; Fiorani 2011, 14; and Fiorani 2005, 148.

\textsuperscript{409} Ceccarelli 2011C, 124, with the aid of Factum Arte, corrects the faulty measurements of Almagià 1955, 35, who recorded 675 x 850 cm.
Renaissance cities of Ferrara and Modena. Smaller cities and towns, parishes, churches, and hospitals fill the rectangular fresco, and given that roughly half of the sites are ecclesiastical in function, Nadja Aksamija has noted the scene’s strong emphasis on the Church. The attention given to small and minor churches and parishes in the region not only reinforces Gregory’s reformatory goals, but also presents an image of an Italy prosperously managed and supported by the Catholic faith.

Similar to the fictive canopy on the ceiling, the majority of the western wall—that is, between the two allegories—is painted as if on a tapestry; the folds of the fictive drapery can be seen at the edge of the frescoed architecture surrounding each allegory. The countryside is depicted with west at the top, mirroring the compass orientation one would encounter if arriving from Rome along the via Flaminia and via Emilia. Indeed, the via Emilia radiates down from the city of Bologna located roughly in the center of the map [fig. 151]. The countryside is painted in varying shades of green punctuated by the blue and gray veins of rivers and roads representing the fertile landscape and prosperity of the region. As Ceccarelli has noted, the elevations of the region, seen for example in the painted mountains and valleys, suggest an impression of the area rather than a precise indication of topography. This is likely a result of Dattari’s copying an older map as opposed to conducting a fresh survey of the landscape. Moreover, although each site is placed accurately in relation to one

410 As Almagià 1955, 35, and Ceccarelli 2011A, 41-44, have noted, Danti used the Sala Bologna countryside map as a model for when he painted the Gallery of Maps in 1580-1581. The countryside’s accuracy continued to be praised into the eighteenth century when the Bolognese cartographer Andrea Chiesa was commissioned to make a copy of the map in 1739. This map is today preserved in the Archivio di Stato di Bologna (ASBo, Assunteria di confine ed acque, mappe, n. 2), on which see Almagià 1955, 34; Ceccarelli 2011A, 41; Ceccarelli 2011C, 124; and Comelli 1896, 162.

411 Aksamija, 48. She notes 350 secular labels and 300 religious structures. Unfortunately, given the condition of the fresco, some of the site labels are difficult to read. For a complete listing and probable identification of each label, see the Indice dei toponimi in La Sala Bologna nei Palazzi Vaticani, 189-203. See also Aksamija, 47; Almagià 1955, 35; Ceccarelli 2011C, 125; Comelli 1896, 164-165; and Comelli 1914, 41-42.

412 Ceccarelli 2011C, 124.

413 Ceccarelli 2011C, 125.
another, the fresco lacks any indication of scale and therefore makes it difficult to judge the distance between locations.\(^{414}\)

Ambrogio Lorenzetti’s *Allegory of Good and Bad Government* (1338 – 1340) frescoed in the Sienese Palazzo Pubblico may have provided Sabatini with a visual model, especially when the Sala Bologna countryside is considered with the neighboring depiction of the city of Bologna on the south wall [fig. 152]. Both the Sienese and Vatican cycles show an idyllic view of the countryside and the role it plays in providing food and protection for the city.\(^{415}\)

This idea is advanced by the flanking allegories of *Pax* and *Annona* on either side of the Bolognese countryside, as well as the agricultural frieze bordering the lower portion of the wall. Additionally, as Aksamija has noted, although the map is geographically accurate, it presents an idealized view of the territory, as there is no indication of the border feuds or violent power struggles that afflicted the region at the time.\(^{416}\) Such elements would not have coincided with Gregory’s goal of showing pastoral harmony and religious authority and were therefore understandably excluded. Moreover, it is possible that the Bolognese pope wanted to display an environment that would be brought to peace under his papacy, perhaps as a visual metaphor for his larger goals of reuniting the Church.

\(^{414}\) As Almagià 1955, 35 notes, there may have been a scale painted on the section of wall that is now destroyed. As discussed in Chapter 1, the Sala Bologna was used as a picture gallery after the repatriation of several paintings from Napoleonic France. During this time the west wall was painted over and covered with tapestries. Leo XIII uncovered the wall in 1884, but it was only during the restoration of the ceiling in 1934 that the walls were surveyed. Restorations began on May 13, 1943, but were interrupted shortly thereafter, and never completed. There have been no restorative efforts since, and the wall exists today in ruinous condition. For the tapestries and restoration, see Ceccarelli 2011C, 124, 125 n. 6; Ceccarelli 2011B, 104, 109, n.4; Comelli 1914, 32, 39-41; and Comelli 1896, 162-163.

\(^{415}\) Aksamija, 51.

\(^{416}\) In an effort to raise money without increasing taxes, Gregory reexamined various fiefs throughout the countryside and found that many deeds were in arrears. This was an unpopular crusade for those who were late on payments or who inhabited the fiefs illegally, as they were forced to pay or face prosecution. No family was spared, not even the important Orsini, Colonna, or Sforza, and this led to various feuds throughout the land. For a discussion of the territorial disputes, as well as contemporary remarks, see Aksamija, 47-48; Ludwig Freiherr von Pastor, *The History of the Popes from the Close of the Middle Ages*, ed. Ralph Francis Kerr (London: Kegan Paul, Trench, Trubner and Co., 1930), vol. 20, 515-517; and Leopold von Ranke, *History of the Popes, Their Church and State*, vol. 1 (New York: The Colonial Press, 1901), 296-307.
With the exception of the aforementioned letter dated February 12, 1575, in which Gregory’s desire for a map of both the territory and city of Bologna is expressed, there are no known documents that refer explicitly to the city map on the south wall of the Sala Bologna. Comelli suggested an artist for the fresco, arguing in support of Giovanni (1558 – 1601) and Cherubino (1553 – 1615) Alberti. However, given the wording of the Memorie sulle pitture et fabbriche di Gregorio XIII, as well as Egnazio Danti’s commentary on Giacomo Vignola’s Le due regole della prospettiva pratica (1583), both of which explicitly attribute the room’s decoration to Sabatini, it follows that the Bolognese master and his workshop painted the city map and its flanking scenes.

Similar to that of the western wall, the entirety of the decoration on the southern wall appears on a fictive tapestry; the folds in this case can be seen at either edge of the wall and gathered above the door. Like the representation of the neighboring countryside, the map of Bologna is the oldest, largest, and most complete representation of the city that survives. Although it remains unclear who produced the cartographic model, Ceccarelli has argued that any archetype used would have been enlarged to fill the wall given the fresco’s large scale (456 x 607 cm). Moreover, taking into account the enormous detail seen in the various buildings and streets depicted, it is likely that Sabatini additionally referred to individual sketches of particular areas of the city.

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417 Comelli 1896, 158, 161; and Comelli 1914, 38. Serlupi Crescenzi 1992B, 155, follows Comelli’s attribution. 418 Almagià 1960, 16; and Ceccarelli 2011B, 104. See Appendix 3A,B for the wording of the Memorie and for Danti on Vignola. 419 Ceccarelli 2011B, 105. See also Ceccarelli 2011A, 36-37. Ceccarelli has suggested a map by Cherubino Ghirardacci from 1572 that is no longer extant as a model, but despite the closeness in dating, there is no direct evidence to link this map to the Sala Bologna. Similar to the measurements of the countryside, with the aid of Factum Arte, Ceccarelli presents a more accurate size of the map, correcting the measurements of Almagià 1955, 34 (525 x 695 cm), and Ghizzoni, 143 (466 x 638 cm).
Painted below two golden personifications of Fame, the city is presented surrounded by its medieval walls and shown with south at the top [fig. 7]. The only inhabitants featured in the map are painted in the lower center, engaged in a game of soccer [fig. 153]. Ceccarelli has suggested that such a joyful depiction of the population represents the city’s beneficent leadership and management, similar to the iconographic objectives found in the Sienese Allegory of Good and Bad Government.\textsuperscript{420} As mentioned above, a connection should be made here with the neighboring countryside, demonstrating the agricultural wealth of the territory that gives prosperity to the city.

The famous medieval towers of the Asinelli and Garisenda families are found at the lower left of the map’s center, and other features unique to the city, such as its famed covered porticoes, are seen lining the major streets, each of which is labeled.\textsuperscript{421} Additionally, special attention is given to the waterways weaving throughout the city, each of which is carefully painted with crossing bridges. Visual priority is given to religious buildings, distinguished by roofs painted in gold leaf, a beautiful example of which can be seen in the depiction of San Petronio in the map’s center [fig. 154]. Located in Piazza Maggiore, next to the Palazzo Comunale and Giambologna’s Fountain of Neptune (c. 1563), the tri-level roof of San Petronio and its bell tower shimmer brightly and capture the attention of the viewer. Additionally, the lower portion of the church’s façade is accurately rendered with pilasters and pedimented doors; the upper level, unfinished to this day, presents an imagined solution to the architectural front.

The detail given to the painted church façades, as well as their shining gold leaf roofs, demonstrates the significance of the city’s ecclesiastical buildings, similar to that found in the countryside. The importance of the Church and its relationship with Bologna is additionally

\textsuperscript{420} Ceccarelli 2011A, 44.
\textsuperscript{421} For a detailed description of the map and its architectural features see Ceccarelli 2011B, 105-109.
expressed in the bordering scenes, also painted by Sabatini.\footnote{Almagià 1955, 35 suggests the involvement of the Alberti brothers, but similar to the central map, the wording of the *Memorie sulle pitture et fabrique* and Danti on Vignola indicates Sabatini’s hand. For a comparison of the figures to other works by Sabatini, see Sambin de Norcen 2011B, 109.} To the left is *Gregory IX Delivering to the Bolognese Doctors the Codex of the Decretals*, and to the right, *Boniface VIII Delivering to the Bolognese Doctors the Sixth Book of the Decretals.*\footnote{For these scenes see Michele Danieli (2011A), “Lorenzo Sabatini e la committenza Gregoriana nei Palazzi Vaticani,” in *La Sala Bolognese nei Palazzi Vaticani*, 80; Fiorani 2005, 145; and Sambin de Norcen 2011B, 109-110.}

The scene on the left was first identified in the *Memorie sulle pitture et fabrique* and follows the well-established tradition of combining the facial features of the current pope with the thematic presence of a historical pontiff, in this case Gregory XIII in the guise of Gregory IX (r. 1227 – 1241). Such iconography not only glorifies the contemporary pope, but also visually demonstrates an uninterrupted continuation of the papacy. Although similar imagery can be found elsewhere in the Palazzo Vaticano, for example in Raphael’s Stanza d’Eliodoro (1512) with the combination of Leo X (r. 1513 – 1521) and Leo the Great (r. 440 – 461), the unbroken lineage of St. Peter held special significance for Gregory XIII as a reformist. Such iconography helped underscore the strength and power of Catholicism in contrast to the newly formed Protestant church.

In 1230 Gregory IX commissioned the Dominican friar Raymund of Peñafort (1175 – 1275) to compile a single comprehensive collection of decretals, or the papal letters of canon law, from Gratian’s *Decretum Gratiani* of c. 1150. This new edition, named simply the *Decretales Gregorii IX* or the *Liber extra*, was completed in 1234 and immediately sent to the Universities of Bologna and Paris. Used until the twentieth century, this compilation included over two thousand individual decretals and immediately became the authoritative edition studied in universities and amongst the clergy.\footnote{For Gregory XIII’s revision of the decretals, see Pastor, vol. 19, 279-280.}
In the Sala Bologna scene Gregory IX presents his newly formed edition to two University of Bologna doctors who were charged with the task of preserving and promulgating the work. Identified by their academic robes and ermine collars, the doctors kneel in reverence before the pope and accept his book. To the right of the seated pope is Gregory XIII’s Cardinal Nephew Filippo Guastavillani, shown in clerical robes and holding a book and rolled scroll.\(^{425}\) Behind the pontifical throne in the left-hand corner is the papal librarian Guglielmo Sirleto (1514 – 1585) painted in profile.\(^{426}\) To the right of the scene and painted in fictive bronze is a group of academic devices including an armillary sphere, two bound books, a trumpet, and two laurel crowns. Such iconography implies the importance of the sciences and liberal arts taught at the University of Bologna, a theme that is further demonstrated with the emblematic frieze of scientific instruments framing the lower portion of the entire southern wall (to be discussed below).

The *Memorie sulle pitture et fabrice* identifies the scene to the right of the city map as *Boniface VIII Confirming the Privileges to the Doctors and Students of the University of Bologna*, but as Sambin de Norcen has demonstrated, the inscription displayed on the pages of the open book in Boniface’s hands (BONIFACIES [BON]ONIAE B[ENEDICTIONEM] / SACROSANCTAE ROMANAE ECCLESIAE QUAM) suggests that the scene instead represents *Boniface VIII Delivering to the Bolognese Doctors the Sixth Book of the Decretals.*\(^{427}\)

In 1298 Boniface VIII (r. 1294 – 1303) had published the *Regulae luris*, a compilation of eighty-eight legal pronouncements that became the new authoritative key for correctly understanding canon law. This set of dicta was included at the end of the *Liber Sextus*, one

\(^{425}\) Sambin de Norcen 2011B, 110, n. 9, notes how the likeness of Guastavillani is based on a portrait of the Cardinal nephew that survives in a photographic reproduction. For more on the portrait see Angela Ghirardi, *Bartolomeo Passerotti pittore (1529 – 1592)* (Rimini: Luisè, 1990), 185-186.

\(^{426}\) Sambin de Norcen 2011B, 110, notes how the librarian’s portrait is also found above his hometown of Calabria in the Galleria delle Carte Geografiche.

\(^{427}\) Sambin de Norcen 2011B, 110.
of the books contained within the *Corpus Iuris Canonici*, which Boniface distributed throughout the Church. In the Sala Bologna, Boniface, whose portrait is based on that of his tomb in St. Peter’s, is shown handing the *Liber Sextus* to a University of Bologna doctor, mirroring the action of Gregory IX on the left. ⁴²⁸ Standing next to the papal throne is an unidentified cardinal who assists the pope in delivering the book, while two additional figures occupy the space behind Boniface. Below the painted steps is another doctor in the lower right corner as well as another professor and three younger male figures, each of whom gestures back towards Boniface.

The decretal scenes are meaningful in the context of the Boncompagni papacy for two reasons. Both Gratian and Raymund of Peñafort taught law at the University of Bologna, and thus through their authors, the decretals are inherently linked to the Bolognese academic institution. ⁴²⁹ Gregory XIII not only studied at the University of Bologna, graduating in 1530 with a degree in civil and ecclesiastical law, but before embarking on a career within the Church he also taught at the university between 1530 and 1539. ⁴³⁰ Moreover, Gregory made further revisions to the decretals, continuing the endeavor begun by Pius IV. Spanning the majority of his papacy, the project was brought to fruition in 1582 when Gregory XIII’s revised edition was promulgated. ⁴³¹

*A Perspectival View of Bologna*

Completing the triad of terrestrial maps in the Sala Bologna is a perspectival view of the city measuring 175 x 225 cm and painted in the upper center of the northern wall [fig.

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⁴²⁸ As noted by Sambin de Norcen 2011B, 110.
⁴²⁹ Fiorani 2005, 45; and Fiorani 2011, 18.
⁴³¹ For these revisions see Ciappi 42-45; Fiorani 46-47.
Little is known about this small fresco, as it is first mentioned in the anonymous eighteenth-century *Del Palazzo Pontificio di San Pietro in Vaticano, sec. XVIII*. Moreover, scant attention has been given to it in secondary literature. As such, the author of the fresco remains unknown, but given the wording in the *Memorie sulle pitture et fabbriche* and Danti on Vignola, as well as stylistic similarities to the work in the rest of the room, Ceccarelli notes that there is no reason to doubt Sabatini’s hand.

Today the northern wall is severely damaged, as it was painted over and covered with tapestries in the nineteenth and twentieth centuries. However, the description of the wall in *Del Palazzo Pontificio di San Pietro in Vaticano, sec. XVIII*, as well as the remaining fresco remnants in the left-hand corner, suggest that the perspectival view originally extended over the entirety of the upper wall. Additionally, from the remains of the fresco on the right of the wall it becomes evident that the view of the city appears as if painted on a hanging tapestry, similar to each of the other cartographical representations in the room. This can be seen in the upper right edge and lower center of the wall where a painted red border of cloth with golden fringe and tassels is found.

In the recent *La Sala Bologna nei Palazzi Vaticani*, Ceccarelli analyzed the fresco for the first time and determined that the city is painted as if seen from the hill church of San Michele in Bosco [fig. 156]. In the foreground of the scene is the Aposa creek that runs through the city, and in the center background one can glimpse the northern arched walls of

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432 For this measurement see Ceccarelli 2011D, 135.
433 “…sotto della quale su la dritta subito usciti della porta v’è sopra le 2 finestre grandi con parapetti vuoti corrispondenti nel Cortile de Falegnami in larghezza di tutta la facciata una veduta o prospetto della città di Bologna…” ASR, MS. 496, f. 408v, on which see Appendix 3C.
434 The fresco is only mentioned in passing by Ghizzoni 2003, 145, n. 122; and Fiorani 2005, 144. Almagià omits it entirely.
435 Ceccarelli 2011D, 135.
436 The scene is described as crowning the entire wall in ASR, MS. 496. The fresco was restored in 1943 at the same time as the countryside on the western wall. See Ceccarelli 2011D, 135.
437 For this and the following descriptions see Ceccarelli 2011D, 135.
the city. Celebrating the most prominent feature of Bologna’s skyline, Sabatini has painted eleven of the city’s famed towers: the paired campanili of San Petronio rise on the left, followed by the Torre dell’Arengo, the campanile of San Pietro, the two towers Prendiparte and Azzoguidi, the campanile of San Martino, the leaning towers of Garisenda and Asinelli, the campanile of San Domenico, and, on the far right, the tower of Palazzo Pepoli Vecchio.

The Allegories

In addition to the three terrestrial maps, the walls of the Sala Bologna are decorated with five allegories standing in niches: Pacis and Annona flanking the countryside on the west wall; Bononia between the two windows on the north wall; and Securitas and the head of an unknown figure, likely Iustizia, on the east wall. It was during the ceiling restorations of 1934, when the walls of the room were also deemed necessary to restore, that the allegorical frescoes were rediscovered and the first traces of their forms were uncovered. Although there is no record of who painted the five figures, given the wording of the Memorie sulle pitture et fabrique and Danti on Vignola, Sabatini is once again the most likely candidate. Like the perspectival fresco on the northern wall, the allegories have never been studied thematically, and as Sambin de Norcen has demonstrated in her scheda of the recently published La Sala Bologna nei Palazzi Vaticani, these five figures provide a key to understanding the overall theme of the room.

Each of these allegories is featured on various papal medals minted for Gregory XIII, demonstrating that the figures and their meanings were a standard and important part of Boncompagni iconography. Annona appears on one such medal below the phrase ANNONA PONTIFICIA as a partially nude woman holding a small statue and an

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438 Ceccarelli 2011C, 124.
overflowing cornucopia. To the left is a basket of grain, and on the right is a boat [fig. 157]. This same medal is also found on the left hand side of Gregory XIII’s Portrait with Building Works from Alphonsus Ciacconus’ Vitae et res gestae Pontificum Romanorum (1677) [fig. 158].

Dressed in armor and surrounded by weaponry, Bononia is depicted on a different medal below the words LEVATA ONORE PATRIA [fig. 159]. On a third medal, and representing the fortifications that Gregory had restored in Rome, Securitas is shown sitting on a throne with one hand supporting her resting head, and the other holding a scepter [Fig. 160]. To her right is an altar with a flame, and encircling the entire scene is the motto SECVRITAS POPVLI ROMANI. The last of the allegories featured in both the Sala Bologna and on Gregorian portrait medals is Justitia. In medallion form, Justice is shown enthroned and surrounded by the figures Prosperity and Peace [fig. 161]. The words IVSTITIA PACEM COPIAM PAX ATTVLIT crown the scene.

Pacis and Annona, Western Wall

To the left of the countryside on the western wall is the allegory of peace [fig. 162]. She is depicted as a blonde woman wearing a white and yellow dress with a blue cape fastened at the breast. A wreath of olive leaves and red roses crowns her head, and she gazes adoringly at the upper left corner of the countryside. In her right hand she holds an olive branch and in her left a golden statuette of the Boncompagni dragon. A collection of

440 Filippo Bonanni, Numismata pontificum romanorum quae a tempore Martini V’ usque ad annum MDCXCIX, vol. 1 (Rome: Ex Typographia Dominici Antonii Herculis 1699), medal VI, 324-325.
441 Alfred Armand, Les Médailleurs Italiens des Quinzième et Seizième Siècles, vol. 3 (Paris: Librairie Plon, 1887), 299.e; Bonanni, medal XXXIII, 341.
442 ANS 1956.163.1679; Bonanni, medal VII, 325-326.
443 ANS 1956.163.1681; Bonanni, medal XXXII, 339-340.
444 Until the publication La Sala Bologna nei Palazzi Vaticani, Pacis was the only identified figure. See for example, Fiorani 2005, 144; and Fiorani 2004, 179. For the following identifications I refer to Sambin de Norcen 2011C, 140-145.
armor is gathered at her feet, including a halberd, a leather doublet, a metal helmet, and a painted shield, all of which have been laid down in surrender.

In the center of the painted pediment upon which she stands is a niche with a white scroll surrounding an olive crown. At the top center the letters PACIS CONS are visible, undoubtedly forming the phrase PACIS CONSERVATOR in complete form, identical to the emblematic inscription found in the upper southeast corner of the room above the depiction of Thales in the *quadratura* [fig. 42]. The inscription on the bottom right of the scroll is unfortunately illegible. Flanking the niche on either side are two putti whose reclining positions recall the figures of *Dusk* and *Dawn* on Michelangelo’s tomb for Lorenzo de’ Medici in the Florentine New Sacristy of San Lorenzo (1519 – 1534). Each putto holds an olive branch further signifying peace and gazes at the other.

Centered between *Pacis* and the countryside is a vertical panel of white *gratteschi* painted on a red background, similar to those found in Gregory’s other Vatican commissions, including the later Torre dei Venti and the Galleria delle Carte Geografiche. Three rectangular images punctuate the *gratteschi*, the center of which includes a figure in a papal tiara and cloak painted in golden grisaille. What remains of the scene above is a seated woman, and below, a standing armored figure.

On the other side of the wall is the badly damaged figure of *Annona*, allegory of the grain harvest [fig. 163]. Her clothing is similar in color to that of her partner *Pacis* but is tied at the waist with a white belt. She wears a floor-length red cape and a crown of wheat. Facing the viewer, she gestures out with her left arm, although the plaster around that hand has been damaged. In her right hand she holds two stalks of hemp native to the Bolognese

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445 For this inscription see Chapter 1.
region, and opposite that is a cornucopia overflowing with wheat.\textsuperscript{446} To the left of \textit{Annona} and mirroring the composition painted on the opposite side of the wall is a vertical series of \textit{grotteschi} and rectangular scenes, of which only the upper two survive. The scene at the top includes a seated figure dressed in large gowns with an assortment of objects scattered at the base of her throne, including a stack of books, a crown, and an urn. The central golden scene is today completely illegible. The pediment below \textit{Annona} has mostly deteriorated, but the two putti, similar to those seen with \textit{Pacis}, are still legible. Additionally, the upper section of the inscribed scroll in the center niche is still visible and contains the phrase \textit{ANNONAE}, identifying the figure.\textsuperscript{447}

\textit{Annona} is similar in both appearance and meaning to the more common allegories of Abundance and Agriculture, and as Sambin de Norcen argues, her inclusion should be interpreted as representing Gregory’s personal contribution to the Italian food supply, including the transformation of the Roman Baths of Diocletian into grain reserves.\textsuperscript{448}

Indeed, Gregory XIII imposed new restrictions on both the export of grain as well as the amount one could purchase as a way of ensuring a plentiful supply for the entire population.\textsuperscript{449} Such reforms were successful, as Michel de Montaigne, a French philosopher who visited Rome in 1580-1581, remarked on the abundance of food within the city.\textsuperscript{450}

As Aksamija argues, the placement of the dragon statuette held by \textit{Pacis} and painted between the countryside and the city map demonstrates that the Boncompagni pope’s reign

\textsuperscript{446} For the identification of the hemp see Sambin de Norcen 2011C, 140.

\textsuperscript{447} The inscription on the right section of the scroll appears to read CO, which Sambin de Norcen 2011C, 140, has identified as the beginning letters of \textit{CONSERVATOR}.


\textsuperscript{449} Pastor vol. 20, 542.

\textsuperscript{450} Pastor vol. 20, 552-557.
will provide peace to the land. Moreover, the idealized representation of the Bolognese countryside demonstrates not only the peace provided by the territory’s efficient protection and abundant production of food, as represented by *Annona*, but also serves as a metaphor for the Church that Gregory hoped to reconcile. The placement of *Pacis* and *Annona* flanking the countryside, therefore, provides an allegorical enhancement to the message contained within the cartographical fresco in the center.

*Bononia, Northern Wall*

Below the perspectival view of Bologna on the north wall is the seated figure of *Bononia* [fig. 164]. Although much of the fresco has deteriorated, several iconographic details can be seen that give an identity to the figure and also suggest her significance in the overall decorative and thematic program of the room. Similar to the University of Bologna doctors painted in the flanking scenes on the opposite southern wall, *Bononia* wears a cloak of gold with a white ermine collar. Furthermore, she is crowned with a laurel wreath from which sprout the two towers of Asinelli and Garisenda. Several books appear in the scene, including one held open in each of her hands, a stack propped up near her left foot, and an additional stack below her right foot. She gazes at the open book held in her hand in which a few of the letters are partly visible but illegible. The pages in the central book by her left foot are also partially visible.

In addition to the books, other objects scattered around the allegory represent the cultural heritage of Bologna and the importance of its university. A violin on the right signifies music, or more broadly, the liberal arts, and a blank horoscopic tablet propped up

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451 Aksamija, 51.
452 The letters present are: O --- T // O – NINTS // NA -- // SCIR[E] on the left page. For the addition of the E to the letters SCIR, and therefore spelling “scire,” or “to know,” see Sambin de Norcen 2011C, 145.
453 For a similar argument see Ceccarelli 2011A, 44-45.
beneath Bononia’s sandaled foot refers to astrology/astronomy. I argue that the inclusion of this tablet—identical to the one held by Thales in the quadratura above—demonstrates the practice of the heavenly sciences in Gregory’s hometown.

The academic robes and laurel crown of Bononia are significant, as they differ from other representations of the allegory in which she is clothed in military dress. Two papal medals, one of Julius III [fig. 165] and the aforementioned example of Gregory XIII [fig. 159], as well as a 1555 engraving by Giulio Bonasone [fig. 166], depict Bononia with flowing robes and a military helmet. Such a change in clothing must be seen as an effort to emphasize Bologna’s university and academic heritage above all else. Moreover, the scattered accoutrements, including the books (with the phrase SCIRE), the violin, and the horoscopic tablet, all together suggest the advanced curriculum at the University of Bologna, as well as astrological/astronomical inquiry, two subjects that will be more thoroughly discussed below.

The faded cornucopia seen at the bottom right also refers to the city via its famed agriculture. Additional objects more traditionally associated with allegorical representations of the city are seen on the right edge of the wall. Beginning at the top is a stack of open books followed by a golden plaque with the inscribed phrase BONONIA DOCET, “Bologna teaches,” in the center. This phrase also appears, for example, in Bonasone’s print, and once again explicitly heralds the superiority of the oldest university.

Below the plaque is a red oval with a lion holding up the Bolognese flag, again identical to the iconography of Bonasone’s print. The flag is quartered into two red fields

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454 Sambin de Norcen 2011C, 145, mistakenly identifies the tablet as a polyhedron.
455 Bonasone’s Allegory of Bononia is part of a larger group of engravings published in the Emblems of Achilles Bocchius, a copy of which is held in the British Museum, acc. H.5.77.
456 Each of the abovementioned allegorical examples include books but not to the extent seen in the Sala Bologna. Additionally the Sala Bologna example lacks the inclusion of armor, another standard element in the allegory’s iconography.
457 Sambin de Norcen 2011C, 145 completes the phrase as “Bononia docet mater studiorum.”
with white crosses and two blue fields with the word LIBERTAS painted in gold. Filling the bottom corner of the wall is a second golden plaque with the inscribed phrase SPQB, a motto also commonly portrayed with Bononia.

_Securitas and Iustizia, Eastern Wall_

Due to the construction of the Palazzo Sisto V beginning in 1585 and subsequent white washing, the eastern wall of the Sala Bologna is poorly preserved. The eighteenth-century _Del Palazzo Pontificio di San Pietro in Vaticano, sec. XVIII_ contains a report of the wall’s decoration including the allegories of Justice and Peace, various _imprese_ of Gregory XIII, miscellaneous figures, and painted balustrades of fictive marble. 458

On the right-hand side of the wall is the allegory the anonymous author of _Del Palazzo Pontificio di San Pietro in Vaticano, sec. XVIII_ identifies as Peace, but whom Sambin de Norcen convincingly argues is _Securitas_ instead [fig. 168]. 459 According to the _Iconologia_ of Cesare Ripa, the allegory of Security is shown as a sleeping woman propped up against a column and holding a spear, and indeed the Sala Bologna figure, dressed in red, yellow, and green, and wearing a crown of leaves, matches this description exactly. 460

Of the allegory _Iustizia_, only the head survives [fig. 169], but from Ripa we know that she appears as a blind woman clad entirely in white, holding a flame and the fasces. 461 Unlike the other allegories in the room, each of which has clearly delineated pupils, the painted eyes of _Iustizia_ lack pigment and as such may be an indication of her blindness. The only other

458 ASR, MS. 496, f. 408v. “…essendovi 2 nicchie framezzo con dentro una figura per ciascuna rappresentanti la Iustizia e la Pace; il resto della facciata è dipinto con altre figure, Arme di Gregorio XIII e diverse riquadrature di pietre mischie.” See also Sambin de Norcen 2011C, 140.
459 Sambin de Norcen 2011C, 140.
461 Ripa, 47.
features visible are her blonde hair and a white veil that presumably echoes the purity of her dress.

The remaining eastern decoration includes a shield above *Iustizia* with the papal keys and a processional baldachin supported by two winged angels [fig. 10]. Just to the left, in the upper corners of the window are two roundels, one with a golden cross and chalice, a sword, and a book. The second roundel, only partially visible, contains a papal tiara. Above *Securitas* is a second shield that is similarly held aloft by two putti and contains a golden Boncompagni dragon against a red background. Above are two winged putti who hold the keys of Peter, and in the center is a papal tiara.

As Aksamija has argued, the allegories of Justice and Security mirror the cartographic and allegorical message seen on the facing wall. They are included to demonstrate the beneficence that the pontificate of Gregory XIII will have on the Bolognese region. Indeed, the importance of Justice and Security within the Boncompagni papacy is further strengthened by the appearance of the only painted coats of arms in the room, located above these eastern allegories. The location of *Iustizia* and *Securitas* on this wall has additional meaning, however, when the original structure of the room is considered. Originally situated between three large windows that looked out over the city of Rome, these allegories extended the message of the judicious and secure consequences of a Boncompagni papacy to the city of Rome in addition to Bologna.

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462 Aksamija, 51.
The Emblematic Friezes

The remaining fresco decoration in the Sala Bologna consists of horizontal friezes with various golden motifs painted above and below the maps on the west and south walls and below the allegory of Bononia on the north wall.

Located directly above the countryside on the fictive tapestry of the western wall is a border divided into thirty-five curved panels, each of which is outlined in gold. A pattern of alternating Boncompagni dragons and masks appears in each section. The lower emblematic frieze below the countryside is badly damaged, and only twenty sections remain visible [fig. 170]. Beginning on the left, the symbols appear in the following order: a quail; an arrangement of gourds; a quadruped; two pears; two ducks; a shaft of wheat and three mushrooms; two quadrupeds; a piece of fruit [BREAK IN PLASTER] (illegible); (illegible); two geese; (illegible); two horses; and seven more panels that are illegible.463 Although the upper western frieze is primarily decorative, the lower emblematic border, as Aksamija has argued, reinforces the theme of the countryside itself: the agricultural richness of the area.464

Painted above the city map on the south wall is a similar border to that seen above the countryside. Instead of two symbols alternating and repeating, however, this frieze contains various symbols of the Church [fig. 171]. Additionally, in contrast to the other friezes frescoed in the room, the objects on the upper western wall are depicted in multiple colors. From left to right the thirty-one panels include: two crossed candles; a Sanctus or altar bell; two crossed candlesticks; two cruets and a paten; a flagon; an aspergillum; a crosier and processional cross; two books; a miter; a galero; a papal tiara; a galero; a miter; two books; a crosier and a processional cross; an aspergillum; a flagon; two cruets and a paten; two crossed candlesticks; an altar bell; two crossed candles; a reliquary; the keys of St Peter;

463 Aksamija 55, n. 47, similarly identifies a selection of the emblems.
464 Aksamija, 52. See also Danieli (2011A), 80.
an incense boat; a sanctuary lamp; two panels of unidentifiable objects; a pontifical cross (Cross of Salem); a ciborium; a processional baldachin; and a patriarchal cross. Each of the symbols portrayed here makes a clear reference to the liturgy, reinforcing the importance of the Church as similarly demonstrated in the decretal scenes below.465

Below the representation of Bologna is an equally complex border divided into twenty-four compartments [fig. 171]. Reading left to right are two books followed by an armillary sphere; two panels with identifiable objects, the latter of which is partially covered by the painted folds of the tapestry [DOOR] an unidentifiable object; a balance and sword; a caduceus; an amphora; a trumpet and laurel wreath; a book and sword; an inkpot with two quills; an unidentifiable object; a shield with the mask of medusa and a spear; a sundial and quadrant; three theater masks; a dragon with a mirror; a globe; two books (one open); two vases; a miter and cincture; an hourglass; five crowns; a throne with a papal tiara; and the front of a temple. As Michele Danieli observes, the nine emblems on the right are once again ecclesiastical in nature, but the remaining fifteen belong to academia.466 Indeed, similar to the collection of golden scientific instruments painted just above the door, many of these symbols exemplify the intellectual atmosphere of Renaissance Bologna and celebrate the city’s academic heritage.

The final emblematic frieze appears below the allegory of Bononia on the northern wall [fig. 172]. Only five panels remain visible, but through this imagery an iconographic theme becomes easily recognizable. From left to right is a numerical chart or calendar; an armillary sphere; an open book with a quill; an inkpot; and an armillary sphere and book. Akin to the majority of symbols below the city map, these five motifs refer to the University

465 Danieli 2011A, 80, notes the profusion of liturgical objects in this frieze, but does not connect them thematically to the remainder of the wall’s decoration.
466 Danieli 2011A, 80.
of Bologna and glorify the renowned characteristics of Gregory XIII’s hometown. Worth noting is the prevalence of astrological/astronomical instruments portrayed both within this frieze and below the feet of Bononia herself, indicating a special reverence accorded to the heavenly sciences.

**Part II: Regional Heritage, Territorial Control, and Papal Goals: The Iconographic Meaning of the Sala Bologna**

Taken as a whole, the decoration of the Sala Bologna reveals three overlapping themes: a celebration of Bologna; an illustration of ideological control via the room’s cartographic and emblematic iconography; and a presentation of Gregory XIII’s Counter-Reformatory goals. Gregory’s intent to honor his hometown has been discussed in previous literature, and to this I will add a discussion of heretofore-unexamined details that suggest the importance of the University of Bologna in his vision. Scholars have also explored the Boncompagni pope’s use of cartography to demonstrate papal control. My contribution here indicates how the same arguments for the relevance of cartographic references should apply to the depiction of the celestial realm on the room’s ceiling. I also argue that the Sala Bologna is the first part of a full cartographic program sponsored by Gregory XIII in the Palazzo Vaticano that includes the Galleria delle Carte Geografiche, the Terza Loggia, and the Torre dei Venti. Finally, I demonstrate in this section how the decoration of the room elucidates Gregory’s Counter-Reformatory goals. By alluding to the realms of contemporary

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science and religion, as I will demonstrate, the pope aspired to project the image of a peaceful and prosperous realm under Catholic leadership.

**A Celebration of Bologna**

Gregory’s room was aptly given the name “la Bologna” in reference to its painted iconography that celebrates the ancient city, including the maps and their emblematic borders, the decretal scenes, and the allegory of *Bononia*. Mascherino’s perspectival illusionism in the intrados of the vault additionally refers to Bologna, as it was in that city that the technique of *quadratura* developed. Moreover, the employment of Mascherino and Sabatini, both of whom hail from Gregory’s hometown, demonstrates a regional nepotism that was a common trend throughout the Boncompagni papacy.469

The celebration of one’s birthplace is a familiar theme in papal art, and yet Gregory may have felt the particular need to commemorate his native city given that the Boncompagni were relatively new to the Bolognese aristocracy. The family did not enter the highest echelon of Bolognese society until Gregory’s merchant father Cristoforo (1470–1546) married the noblewoman Angela (1480–?) of the historic Marescalchi family.470 In effect, the display of maps and emblems referring to the ancient city superimposed with Boncompagni *imprese* in the Sala Bologna would have acted as a way to visually reinforce the family’s identification with their natal city’s history, and, by extension, the family’s legitimacy among the most respected classes of Bolognese society.


In addition to the pope’s familial ties, Bologna was a city worthy of celebration in the late sixteenth century given that the contemporary Cardinal Bishop Gabriele Paleotti (1522 – 1597) emulated the goals of the great Cardinal Archbishop of Milan Charles Borromeo (1538 – 1584) and strove to make Bologna a model city of Post-Tridentine reform. This ambition undeniably played a role in the room’s conception, and Paleotti’s influence will be explored below. A closer examination of the room’s iconography, however, suggests that the frescoes were intended to make specific reference to the importance of the University of Bologna and its tradition of natural philosophy and empiricism. As a generative inspiration for cultural and, by extension, political leadership, such a decorative celebration must be seen as a demonstration of the favor Gregory’s showed to the empirical sciences.

Founded in 1088, the Bolognese Studium is widely considered the oldest university in the world, and many of the most influential Tre- and Quattrocento thinkers, including Dante, Petrarch, and Alberti, are counted among its alumni. The Emilia-Romagna region was marked by political instability in the Early Modern period, but despite this the University prospered, and a number of the most powerful Renaissance popes, including Nicholas V (r. 1447 – 1455), Alexander VI (r. 1492 – 1503), and Pius IV (r. 1559 – 1565), received degrees in law and theology from the institution. Gregory XIII graduated with a degree in

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471 Fiorani 2001, 13, 16; and Fiorani 2005, 150. Paleotti was created Archbishop in 1582.
473 On this same theme see also Grendler, 10, 13, 20.
canon and civil law in 1530, and soon after he joined the faculty and taught law until he moved to Rome in 1539.\textsuperscript{474} Although his attention was focused on judicial studies, Gregory’s exposure to the University’s curriculum in the sciences and its tradition of empiricism had an impact on his thinking that would eventually inform his papacy. This will be further discussed in the last part of this chapter. Before those arguments can be made, however, it is here necessary to outline this influential scientific environment.

As Paul Kristeller notes, faculty records provide insight into the subjects taught in Bologna and show that the oldest curriculum included grammar, logic, Aristotelian philosophy, mathematics, and medicine.\textsuperscript{475} In the fifteenth century the syllabus grew to include canon and civil law, surgery, orthopedics, natural and moral philosophy, astrology, geometry, rhetoric, poetry, and theology.\textsuperscript{476} By the time Ugo Boncompagni began his studies in the sixteenth century, medical botany, astronomy, and metaphysics were also available for study.\textsuperscript{477} Despite such a diverse range of subjects available, both Andrea Padovini and Kristeller note that the University was especially renowned for its teaching of jurisprudence and theology.\textsuperscript{478} A reference is made to these influential programs in the decretal frescoes flanking the city map on the south wall of the Sala Bologna [fig. 7]. As stated above, these historical scenes celebrate Gregory XIII’s involvement with various revisions of the ecclesiastical texts, but in this context they also celebrate the University of Bologna by means of their subject. Gratian, who compiled the original decretals in 1140, taught at the University, and it was to this institution that his corpus of canon law was first promulgated.

\begin{flushright} \footnotesize \textsuperscript{474} For Gregory XIII’s tenure at the University, as both a student and a member of the faculty see Fiorani 2005, 145; Freiberg 2009; Grendler, 20; Giovanni Pietro Maffei, Degli annali di Gregorio XIII. Pontefice Massimo (Rome: Mainardi, 1742), vol. 1, 5; Malagola; Padovini; and Rabotti. \\
\textsuperscript{475} Kristeller, 138-139. See also Grendler, 6. \\
\textsuperscript{476} Grendler, 8; and Kristeller 139-140. \\
\textsuperscript{477} Grendler, 18. \\
\textsuperscript{478} Kristeller 141-142; and Padovini 302. \end{flushright}
and quickly became a cornerstone of the judicial curriculum. Additionally, the revisions made by the two popes depicted in the frescoes—Boniface VIII and Gregory IX—were first distributed to the Bolognese University. The decretals are thus inherently linked to the University, and as such a portrayal of their revisions, as seen in Gregory XIII’s dining room, must be understood within the context of the Bolognese studio.

Despite its historic reputation as a leader in judicial studies, the sixteenth century saw a shift in subjects at the University of Bologna. The energetic pedagogy and innovative thinking of Pietro Pomponazzi (1462 – 1525) and others promoted student interest in natural philosophy and caused an eclipse of the study of law. Ugo Boncompagni studied in the midst of this academic climate and would have been exposed to these new ideas and methodologies. A discussion of the various scholars who instigated this change is outside the scope of this dissertation but the careers of two professors of the period give a sense of the intellectual environment at the time.

Luca Ghini (1490 – 1556) was a botanist at the University between 1527 and 1544, and again between 1554 and 1556. Ghini was among the first to establish the practice of field trips in which students would both observe plants in situ and collect botanical specimens for further study. Additionally, he created the first botanical garden in Europe and put together the first herbarium. A catalog of pressed and dried leaves and flowers, the herbarium allowed students to study various specimens from life rather than from illustrations. These endeavors are significant as they were among the catalysts that instigated change in the otherwise centuries-old pedagogy. Rather than relying solely upon texts and

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479 Fiorani 2011, 18; Friedberg 2009, 45; and Grendler, 5-6.
480 Kristeller 141-142; and Padovini 302.
illustrations as a means of study, scholars such as Ghini understood the importance of observing and collecting empirical data as a way to better understand the world around them. This hands-on approach to research spread quickly throughout various departments within the University, making Bologna the leader in Renaissance natural philosophy studies.

Perhaps more famous is one of Ghini’s successors, Ulisse Aldrovandi (1522 – 1605). Aldrovandi studied law, philosophy, logic, and mathematics at both Padua and Bologna, and graduated with a degree in medicine and philosophy from the latter in 1553. Like Ghini, he led students on excursions to observe and collect plant life and he created his own herbarium that grew to over 4700 samples. In 1559 he became a professor of natural philosophy and in 1561 he was appointed the University’s first chair in that department. As Paula Findlen notes, the popularity of his lectures is well documented and eventually Aldrovandi’s curriculum was hailed as one of the treasures of the city.

Although Aldrovandi’s tenure at the University of Bologna postdates that of Ugo Boncompagni, his work is nevertheless relevant as it represents the tradition of natural philosophy and empiricism that was developing in Bologna at the University during Gregory XIII’s formative years in the Church and during the time of his commission of the Sala

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Bologna.⁴⁸⁴ Discussing Aldrovandi’s decision to teach natural philosophy when he would have been more financially secure in a different field, Findlen notes that “for him, like many collectors of nature, the universities provided the surest method of establishing natural history as a legitimate field of inquiry and of gaining common acceptance for the observational and textual practices developed by naturalists.”⁴⁸⁵

Natural philosophy, that is, the study of nature and the universe, was the precursor to what we define today as the natural sciences.⁴⁸⁶ The discipline was first taught at the universities of Bologna, Padua, and Pisa, but it was largely with Aldrovandi at Bologna that the field grew in popularity and achievement.⁴⁸⁷ Critical to the practice of natural philosophy is the use of empiricism, or the belief that knowledge comes not from relying exclusively upon older texts and/or scripture, but through direct observation and sensory experience. In other words, this new generation of thinkers was not content with studying Aristotle and Pliny alone, but wanted to witness nature and its phenomena for themselves. Contemporary sympathy with this empirical approach to learning is demonstrated with the depictions of Thales and Anaximenes painted within the intrados of the vault in the Sala Bologna. Like the two ancient philosophers, this new breed of scholar educated at the Bolognese studio sought hands-on experience and data collection in order to explain the natural world through reason and logic rather than tradition and religion.

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⁴⁸⁴ Aldrovandi and his relationship to Gregory XIII and the Boncompagni court will be discussed in detail below.
⁴⁸⁵ Findlen 1994, 257.
⁴⁸⁶ It is important not to confuse natural philosophy with natural history, which is limited to the study of plant and animal life. One of the defining differences between natural philosophy and what we define today as science is the use of a proper scientific or experimental method, which was not developed until the seventeenth century.
The University of Bologna’s tradition of inquiry and empiricism is made manifest in the Sala Bologna in various other ways. The room, by nature of its design, emphasizes the skills one would acquire at the University. The type of decoration employed—celestial and terrestrial cartography, perspective, quadratura—and the knowledge needed to paint each successfully—mathematics, geography, cartography, astronomy, and optics, what Francesca Fiorani labels the “mixed sciences”—are all disciplines one could acquire at the Bolognese studio. The iconography of the room additionally refers to the academic world of Bologna, as the celestial and terrestrial maps represent science in visual form. They show what man has observed and the data he has collected in order to most accurately portray the world around him and the sky above him. Additionally, the emblematic frieze below the countryside should be seen not only as a depiction of the various plants and animals native to that region, but also as a visual representation of natural philosophy itself.

As I have argued in Chapter 2, the figures of Thales, Anaximenes, Aratus, Ptolemy, and Manilius painted in the quadratura represent a history of knowledge. Their respective fields of study, such as natural philosophy, astrology, astronomy, and geography, may also be seen as a representation of the major faculties taught at Bologna. Each of these historical figures was the definitive authority in his field, and their ideas and various treatises formed the basis of each corresponding curriculum from the founding of the Bologna Academy to that of Gregory XIII’s pontificate and beyond. Therefore, this collection of historical figures should also be seen as a tribute to the various branches of learning that made Gregory’s alma mater famous.

Further iconographic details of the room refer to Bolognese academics. The emblematic frieze below the city map on the south wall contains various scientific

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488 Fiorani 2011, 15-16; Fiorani 2005, 149; and Fiorani 2004, 182-183. For more on the mixed sciences see Applebaum, 438-440.
instruments and symbols, including an armillary sphere, a caduceus, a sundial and a quadrant [fig. 171]. Among the other items included—books, ink pots, and laurel wreathes—these objects must be understood as visual references to the University and the subjects taught there.

Perhaps the most significant iconographic reference to the University of Bologna is the depiction of the allegory of Bononia herself [fig. 164]. Her portrayal in the Sala Bologna differs significantly from more traditional representations such as Bonasone’s print of 1555 [figs. 165, 166]. The standard dress for Bononia consists of flowing drapery with a breastplate and a military helmet. In the Sala Bologna the allegory is crowned instead with a laurel wreath and wears the same academic robes as the Bolognese doctors in the decretal scenes on the opposite south wall. Additionally, instead of being surrounded by armor and weaponry, the Vatican allegory is enthroned amongst a stack of books and rests her foot upon a horoscopic tablet. No other representation of the allegory shows such dress or accouterments, and we may therefore assume that these iconographic adjustments were contoured to reflect the tradition of learning represented by the Bolognese University within the larger Boncompagni heritage.

In addition to these iconographic details, the entire ceiling of the Sala Bologna represents the contemporary academic atmosphere of Gregory’s alma mater. Astrology had been taught at the University since 1125 and it continued to be an integral component of the medical program into the Cinquecento. As both Andrea Battistini and Kristeller note, however, the department of mathematics, and therefore astronomy, attracted innovative Renaissance scholars to the faculty such as Luca Pacioli (1445 – 1517); Lodovico Ferrari (1522 – 1565);
Egnazio Danti (1536 – 1586); Pietro Antonio Cataldi (1548 – 1626); and Giovanni Antonio Magini (1555 – 1617). Nicolaus Copernicus also studied there between 1496 and 1501.

Similar to what was happening in the department of natural philosophy, the study of mathematical astronomy became a major academic force at the University, and astrology, although never abandoned, decreased in student popularity. The Sala Bologna gives visual evidence to this transition and celebrates the astronomical atmosphere of contemporary Bologna. Rather than displaying the astrological significance of Gregory’s birth or election, the ceiling instead celebrates the astronomical mathematics necessary to study the heavens in the pre-telescopic sixteenth century and which were promoted in the Bolognese studio.

**Gregory XIII’s Control over the Terrestrial and Celestial Realms**

A second theme present in the Sala Bologna is one of ideological control. Taken as a whole, the three terrestrial representations on the walls are part of the well-established tradition of political and/or religious aggrandizement used by patrons to demonstrate their control—intellectual, political, or temporal—over the world. The uniqueness of the Sala Bologna lies in its unprecedented use of cartographic precision in depicting the heavens to make such a statement.

The display of cartographic murals to represent a ruler’s territorial authority are recorded in the histories of ancient Rome. From Livy we know that Tiberius Sempronius Gracchus had a large map of Sardinia displayed in the temple of Mater Matuta.

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489 Battistini, 30-38; and Kristeller, 143. See also Fiorani 2005, 155. Demonstrating the continued influence of Bologna's new astronomic program, Giovanni Domenico Cassini (1625 – 1712), who was the first to observe the moons of Saturn, was a professor at the University between 1650 and 1668.

490 Kristeller, 143.

491 For maps in antiquity see Courtright 2003, 100; Fiorani 2005, 12; and Jürgen Schulz, *La Cartografia tra scienza e arte: Carte e cartografi nel Rinascimento italiano* (Modena: Panini, 1990), 27.

Celebrating the Consul's conquering of the island, the map contained depictions of the various battles he led, as well as a dedicatory inscription. Additionally, in the *Natural History* Pliny the Elder describes a painter called Ludius who worked in the time of Augustus and was known for introducing cartographic iconography to private palaces in the form of detailed landscapes. The historian describes the precision of these paintings, with details such as waterways and mountains, villages and buildings, and also expresses how these scenes were pleasing to behold. These two historical accounts tell us that detailed representations of place were commissioned in antiquity for both public and private palaces, and featured topographic details and/or additional décor such as battle scenes. Moreover, both Livy and Pliny illustrate the different functions of these paintings, from the decoration of a villa to the propagandistic and public display of victory and ownership of land.

In the Middle Ages the purpose of map displays evolved, and cartographic murals were most often conceived as a means to demonstrate God’s earthly creation. Less topographically accurate than their ancient predecessors, these medieval *mappaemundi* were often irregular in shape and size and lacked a concrete mathematical relationship between cartographic features. Instead they were heavily ornamented with flora and fauna, as well as historical scenes and biblical narratives as a way of showing the diversity of God’s different regions and the religious miracles that took place in them.

The Renaissance saw a renewed interest in the display of cartographic imagery similar to that described in the ancient histories. The Age of Exploration led to a surge in

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495 For map cycles in the Renaissance see Peter M. Barber, “Maps and Monarchs in Europe 1550-1800,” in *Royal and Republican Sovereignty in Early Modern Europe: Essays in Memory of Ragnhild Hatton*, ed. Robert Oresko,
the popularity of cartographic murals as explorers sent home detailed depictions of newly
discovered lands. Moreover, once a mapmaker completed a design, the newly developed
printing press offered the means to make reproductions on a never-before-seen scale. These
prints could then be widely distributed to interested patrons and artists.⁴⁹⁶

Based on Pliny, Alberti writes in Book VIII of his De re aedificatoria (1452) about the
appropriateness and value of decorative map cycles for public and private spaces.⁴⁹⁷

Additionally, as both Jürgen Schulz and Francesca Fiorani explain, the type of cartographic
imagery painted in the Renaissance, and its inherent meaning, varied greatly.⁴⁹⁸ Map cycles
were commissioned as a way to demonstrate a patron’s interest in the cartographic sciences,
to celebrate military victories, and to serve as visual encyclopedias of various regions. The
earliest example of this latter type is that painted by Egnazio Danti and Stefano Buonsignori
in the Guardaroba Nuova for Duke Cosimo I in the Palazzo Vecchio in 1563.⁴⁹⁹ Often
called the first atlas due to the range of provinces depicted, this series of fifty-three maps was
painted on the outer doors of storage cabinets that contained objects and natural specimens
from each corresponding region. The room was used to aggrandize and legitimize Cosimo’s
position as duke by means of demonstrating his symbolic possession of the cosmos and

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⁴⁹⁶ Fiorani 2007, 804; Fiorani 2001, 73; Schulz 1987, 97.
⁴⁹⁸ Schulz 1987, 113-115; and Fiorani 2005, 12.
⁴⁹⁹ For the Guardaroba see Fiorani 2005, 17-32, 61-92; Rosen; and Schulz 1987, 98-99.
everything in them. Such ideas of ownership are seen elsewhere in the artistic commissions of Cosimo I, as the globe was a part of his political *imprese.*

Similar cycles followed, each particular to the patron, and each representing his actual or desired control over various lands. As Fiorani explains, it is often the non-cartographic and ancillary decoration of a room otherwise dominated by a map cycle that is the key to interpreting the overall meaning of these murals. For instance, Cosimo I had no actual control over the lands depicted in his study. Rather than an actual territorial claim to each region depicted, the painted flora and fauna, the series of portraits of famous explorers, and the objects within the cabinets combined together to suggest a more nuanced meaning of ownership by means of encyclopedic knowledge. Similar iconography—maps and portraits of explorers—is found in Cardinal Alessandro Farnese’s Sala del Mappamondo in the Palazzo Farnese at Caprarola (1574). As Loren Partridge explains, this cycle celebrates the Farnese family and in particular Cardinal Alessandro’s “knowledge and intellectual control of the physical world.”

In contrast to these cycles are Gregory XIII’s cartographic commissions, including the Sala Bologna, the maps in the Galleria delle Carte Geografiche (1580-1581), and those in the northern wing of the Terza Loggia (1580) [figs. 31, 173]. Instead of portraits of explorers and a collection of various objects, these three cycles combine cartographic

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500 We know from Vasari that the room was originally meant to have a ceiling painted with constellations, which would have expanded Cosimo’s claim of ownership to the heavens. See Giorgio Vasari, *Lives of the Painters, Sculptors and Architects,* trans. Gaston du C. de Vere (New York: Knopf, 1996), vol. 2, 891-893.

501 On which see Fiorani 2005, 33-59.


503 Fiorani 2007, 813, 816; and Fiorani 2005, 3.


505 There are of course myriad cartographic examples that I am omitting from this discussion. For a complete listing of Renaissance map cycles, including those no longer extant, see Fiorani 2007.
imagery with religious iconography to signify an unbreakable connection between the celestial realm of God and the earthly world of man.  

Given the ancient and Renaissance tradition of representing one’s control via cartographic imagery, each of the terrestrial maps painted in the Sala Bologna should be seen as representing Gregory’s authoritative claim over his birthplace. As Ceccarelli notes, the city’s importance is demonstrated through its depiction from all possible viewpoints: a city view, a territorial view, and a perspectival view. Additionally, the maps are unique for their size—there are no other contemporary examples whose dimensions are comparably large. Moreover, in addition to the maps themselves, much of the other iconography in the room, as explored above, celebrates the Boncompagni hometown, including the emblematic friezes, the decretal scenes, the allegories, and the quadratura figures. Rather than suggesting a larger theme of world exploration or the possession of different regions via the collection of various curiosities, as in the case of the Sala della Mappamondo and the Guardaroba Nova, the ancillary decorations in the Sala Bologna refer back to the subject of the maps themselves: Bologna.

The city of Rome also plays a role in the display of Gregory’s authoritative control in the Sala Bologna. The juxtaposition of the painted landscapes with the views of Rome seen through the five windows suggests a conflation of ideology: the frescoes and real views

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508 Ceccarelli 2011A, 36.
combine to demonstrate a symbiotic relationship of power between the two great cities. The city of Gregory’s birth, aligned visually with the city from which he draws his ecclesiastical power, implies a symbolic celebration of a kind of Divine Providence—Bologna and Rome—in which symbols of the unity of heaven and earth are manifested in a policy that aimed to unite all Christians, East and West.

Completing the cartographic iconography of the Sala Bologna is the vision of heaven painted on the ceiling, and it too should be considered a demonstration of authority. Gregory XIII, in his embodiment as the successor of Peter, represents the papacy’s, and therefore the entire Catholic Church’s, jurisdiction over the heavenly realm. It is also important to remember that the stars are here painted from an outer-celestial perspective, thereby replicating God’s perspective instead of man’s. In essence this point of view suggests that Gregory sees and knows what God Himself sees and knows.

The ceiling fresco in the Sala Bologna is especially remarkable as it is the first time the ideological control of the divine realm has been displayed through the means of cartography.\textsuperscript{509} Compare it to the presentation of heaven in the vaults of the Galleria delle Carte Geografiche for example, where religious miracles and events are painted in correspondence to the various regions depicted on the walls below. Rather than representing heaven itself, these narratives signify God’s kingdom through historical narrative. By nature of its cartographic design, the Sala Bologna ceiling instead presents the viewer with a visual conception of Gregory’s authority while at the same time maintaining another overarching theme of the room, the use of science.

Given this limited scope of regional decoration, the cartography of the Sala Bologna must be seen as a personal statement for the Boncompagni pope. The terrestrial maps show

\textsuperscript{509} The Guardaroba Nuova was to have a display of the constellations painted on the ceiling, but this design was never realized.
his origins, the views of Rome his earthly kingdom, and the ceiling his authority in the divine realm. The remaining iconography of the room—various coats of arms and *imprese*, including that on the marble floor—suggests that Gregory is the intercessor between heaven and earth. When a contemporary viewer stood in the room he was surrounded by these visual metaphors and would have been overwhelmed by their intended message.\(^{510}\) Indeed, the Sala Bologna is small (13.35 x 8.92 m), and the maps cover the south and west walls, while the views of Rome fill those to the north and east. Additionally, the vault is relatively low (approximately 674 cm in height),\(^ {511}\) and visually dominates the room with its rich blue coloring, suggesting its greater symbolic importance than the earthly maps on the walls. The ceiling, in its representation of the entire and divine realm of God beyond the Earth and the planets, indicates the ultimate goal of every Christian, and the decoration of the room suggests that Gregory as pope provides the means to this end.

The personal iconographic message of the Sala Bologna, together with the physical space of the room, creates an intimate experience that is especially apparent when compared to the pope’s later cartographic frescoes in the Galleria delle Carte Geografiche [fig. 173] and the Terza Loggia [fig. 31]. The Galleria is unprecedented in both scale and detail and the Terza Loggia contains maps of all regions of the world. When compared to these later projects, the Sala Bologna seems modest in its propagandistic implications.\(^ {512}\) The Galleria, through a dizzying display of forty maps, each measuring approximately 325 x 435 cm, demonstrates the pope’s and thus the Catholic Church’s authoritative claim to a peninsula that was not yet unified politically. The Post-Tridentine message is clear: Italy is a single

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\(^{510}\) Adam Lowe suggests that the intimacy of the room allowed the pope to “envisage the divine, while simultaneously reflecting on earthly governance.” See “Mapping a map: Factum Arte nella Sala Bologna,” in *La Sala Bologna nei Palazzi Vaticani*, 88.

\(^{511}\) My thanks to Adam Lowe and Gregoire Dupond at Factum Arte for this measurement.

\(^{512}\) Fiorani 2005, 167-170, calls the Sala Bologna “narrow-minded” in scope. See also Aksamija, 47, who states that there is no Christian iconography present in the Sala Bologna because the maps are the Christian iconography.
entity whose spiritual and temporal essence is embodied in the power of the pope and his Church. Further reaching in their propagandistic implications are the maps of the world in the Terza Loggia. Here the iconography reflects Gregory’s goals of uniting the world under papal rule and creating a universal church.

Given their proximity in both location and date, as well as their commission by a single patron, the cartographic murals in the Sala Bologna (1575), the Terza Loggia (1580), and the Galleria delle Carte Geografiche (1580-1581), must be considered a separate expressions of the same papal ideology. Key to this program are the principal cities of Bologna and Rome located, like all others, under the realm of the heavens painted in the Sala Bologna. These propagandistic implications are expanded in the Galleria, where maps of the entire Italian peninsula on the walls are paired with religious events in the vaults. Finally, the frescoes in the Terza Loggia spread the message of papal control to the entire world. What began as a personal statement of papal ambition and authority in one dining room grew to encompass Gregory’s hegemonic aspirations in two large and palatial spaces. Together, this triadic program in the Palazzo Vaticano is the only cartographic or cosmographic cycle to attempt an empirically generated representation of the totality of the terrestrial and celestial realms. As such, this expansive iconography explicitly reflects the papal destiny of universal rule.

Contemporary Science and the Counter Reformation

Perhaps the most impressive theme in the decorative program of the Sala Bologna is the one most surprising to modern day sensibilities, namely the concordance of scientific and religious aspirations in the age of the Counter Reformation. In Post-Tridentine Rome

\footnotesize{513 For similar arguments see Barber, 111; and Fiorani 2011, 21.  
514 For similar arguments see Fiorani 2005, 239, 243.}
Gregory XIII ardently supported the implementation of internal religious reforms, as well as the advancement of scientific inquiry in Bologna, Rome, and elsewhere. Indeed, the struggle for reform and the promotion of science are the two principles that informed the Boncompagni papacy. The iconography of the Sala Bologna offers one of the most readily understood examples in art of Gregory’s embrace of empirical science at the service of religion. In this context there was no separation of method, intention, or desired results, as is so erroneously thought in our time.

Gregory XIII’s Support of the Natural Sciences

Unlike Bologna, sixteenth-century Rome is not traditionally thought of as a center for scientific inquiry, and yet there were natural philosophers who popularized the

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profession and created interest among patrons and the public alike. Gregory’s education at the University of Bologna must have played a critical role in shaping his attitude towards the sciences, and as such he was a great promoter of learning in his adopted city of Rome. At the papal court he surrounded himself with scholars who were known for their innovations and new methodologies in the field, and as a consequence, his patronage promoted advancement in natural philosophy and other sciences. As Mario Biagioli notes, “the court [system of patronage] contributed to the cognitive legitimation of the new science by providing venues for the social legitimation of its practitioners, and this, in turn, boosted the epistemological status of their discipline.”

One of Gregory’s principle biographers, Giovanni Maffei, lists several scholars whom the pope favored, including the mathematician Egnazio Danti; the humanist Carlo Sigonio (1525 – 1584); and the German Jesuit mathematician and astronomer Christoph Clavius (1537 – 1612). Clavius taught mathematics at the Collegio Romano between 1565 and 1595 and published a commentary on Euclid in 1574, as well as an attack on Copernicanism in 1581. More significantly, his Commentary on Sacrobosco’s Sphere became the standard astronomical textbook used in various universities throughout the sixteenth century, and he was the chief overseer of Gregory’s calendar reform.

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516 For example, the Botanist Pietro Andrea Mattioli (1501 – 1577) is best remembered for his commentary on Dioscorides’ Materia Medica. Mattioli not only described the plants originally included by Dioscorides, but included his own newly discovered species, exemplifying his personal field studies. Additionally significant is the fact that these new plants had no known medical use, and thus their inclusion indicates the beginning of an evolution from the study of plants for purely medicinal purposes to their own distinct discipline. For Mattioli’s commentary and its popularity in Rome see Findlen 1994, 373.

517 For a discussion of the promotion of science at courts (both secular and papal) see Findlen 1994, 372-373.

518 Biagioli 1993, 2.

519 Maffei, vol. 2, 459-460. See also Pastor vol. 19, 259. For Danti see Maria Luisa Righini-Bonelli, “Danti, Egnatio (Pellegrino Rainaldi),” in Complete Dictionary of Scientific Biography, vol. 3, 558-559; and Settle. For Sigonio see Pastor vol. 19, 261. For Clavius see Applebaum, 144-145; Baldini, 137-169; and H.L.L. Busard, “Clavius, Christoph,” in Complete Dictionary of Scientific Biography, vol. 3, 311-312. For a list of scholars that were involved in the reformation of the calendar, see Pastor, vol. 19, 285.
Although he spent the majority of his time in Bologna, Ulisse Aldrovandi must also be mentioned in a discussion of the scholars supported by the Boncompagni pope. Through his mother Aldrovandi was a cousin of Gregory XIII, and as such he sought favor upon his relative’s election to the papacy. On May 13, 1572, the same day as Ugo Boncompagni’s elevation in the papal conclave, Aldrovandi announced that he had discovered a dragon—the Boncompagni’s heraldic animal—in the family’s hometown of Bologna. Such a find was quickly declared to be a sign of the benevolent papacy to come. The natural philosopher studied the specimen and dedicated his results to the papal nephew Filippo Boncompagni. The purported discovery, as well as the resulting text and illustrations of the specimen, is generally considered the panegyric that stimulated Aldrovandi’s fame and good fortune as a natural philosopher.

In actuality the “dragon” was Aldrovandi’s invention, a combination of miscellaneous lizard, fish, and bird parts [fig. 174]. What is relevant within the context of the Boncompagni papacy and the Sala Bologna is Aldrovandi’s method of study. Rather than declaring the animal a miraculous beast, Aldrovandi attempted to demonstrate that it was instead a product of nature. Following the example of Thales, who appears in the vault of the Sala Bologna, Aldrovandi took an unknown specimen and sought to explain its origins by way of nature instead of mythology. Gregory’s convivial relationship with the natural

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520 For Aldrovandi and Gregory’s familial relationship see Castellini, 108; and Findlen 1994, 17.
523 Findlen 1994, 22; and Ruffini 2009, 84-86.
philosopher demonstrates that the pope approved of such efforts, and perhaps more significantly, his patronage indicates a desire to further the practice.\footnote{524}{For Gregory’s patronage of Aldrovandi see Castellini, 109; and Findlen 1994, 47. Additionally, Zollikofer convincingly argues that the birds painted on the vaults in the Galleria delle Carte Geografiche and the Terza Loggia are based on Aldrovandi’s empirical sketches. Findlen 1994, 373, notes that Aldrovandi provided sketches for the various animals painted within Pius IV’s portion of the logge. It follows that Gregory followed his predecessor and commissioned the natural scientist once again in his own decorative endeavors within the halls.}

Another scholar in the papal court was Michele Mercati (1541 – 1593).\footnote{525}{For Mercati see Bruno Accordi, “Michele Mercati (1541 – 1593) e la Metallotheca,” Geologica Romana 19 (1980): 1-50; Loris Premuda, “Mercati, Michele,” in Complete Dictionary of Scientific Biography, vol. 9, 308-309; and Filippo Maria Renazzi, Storia dell’Università degli Studi di Roma, detta comunemente la Sapienza: che contiene anche un saggio storico della letteratura romana dal principio del secolo XIII sino al declinare del secolo XVIII, vol. 2 (Rome: Pagliarini, 1804), 210.} Under Pius V Mercati became the papal physician and caretaker of the Vatican Botanical Gardens, but he enjoyed special favor with Gregory XIII. The Boncompagni pope designated him a member of the pontifical family, and the two were known to confer together about contemporary scientific trends, including the possibility of founding a museum of natural history in Rome.\footnote{526}{Accordi 3; Premuda 308; and Renazzi, 210.} In a gesture of appreciation for Gregory’s patronage, Mercati dedicated his text on the plague, Istruzione sopra la peste, to the pope in 1576.

Mercati is best remembered for his museum of geological specimens that flourished under Gregory XIII. Known as the Metallotheca, the collection was divided into ten cabinets and included sands and clays; salts and nitrates; different aluminums; stones from animals, such as tortoise shell and pearl; corals, sea sponges, and algae; various minerals including malachite and azurite; natural elements like amber, coal, and sulfur; soft stones including pumice and sandstone; idioforms (stones in a certain form or particular shape); and various marbles.\footnote{527}{Accordi, 1; and Renazzi, 210.} Mercati gave tours of the museum to prominent visitors, including Aldrovandi, and he wrote detailed descriptions of its contents that were engraved on over one hundred
copper plates between 1575 and 1581.\textsuperscript{528} Located in what is now the Pio-Clementino section of the Vatican Museums, the \textit{Metallotheca} is significant as it introduced the practice of empiricism directly to the papal palace. As Paula Findlen notes, “Museums [such as Mercati’s or later Athanasius Kircher’s] captured in miniature the imperial visions of the Early Modern papacy, representing the possession of nature and knowledge as a Catholic prerogative and glorifying the activities of individual popes.”\textsuperscript{529} Mercati’s collection represents a vivid aspect of Gregory’s interests in the new sciences that influenced his papacy and artistic commissions in general, and the decoration of the Sala Bologna specifically. Seen through these powerful lenses, the room is a product of the empirical zeitgeist that permeated the Boncompagni papal court.

In addition to fostering these innovative scholars at court, Gregory also supported his love of learning by generous contributions to various Italian universities.\textsuperscript{530} To the University of Bologna he appointed new faculty, including the jurist Giacomo Menocchio; the philosopher Federico Pendasio; and the mathematician Egnazio Danti.\textsuperscript{531} The Collegio Romano, founded in 1551 by Ignatius of Loyola, was one of Gregory’s major passions, and he commissioned Bartolomeo Ammanati to construct a new and central building in 1584.\textsuperscript{532} To this day it is possibly the most imposing and public manifestation of the Boncompagni reliance on science as a component of papal propaganda and religious policy. The

\begin{footnotesize}
\footnotesize\textsuperscript{528} This project was never completed and the plates were not published until 1648. See Accordi, 1; and Findlen 1994, 233.

\footnotesize\textsuperscript{529} Findlen, 1994, 350.

\footnotesize\textsuperscript{530} For a discussion of the various universities and seminaries that Gregory supported see Pastor vol. 19, 244-258. For Gregory’s visits to various universities see Maffei vol. 2, 75-76.

\footnotesize\textsuperscript{531} Pastor vol. 19, 270.

\footnotesize\textsuperscript{532} For Gregory and the Collegio Romano, see Ciappi, 16; and Maffei vol. 2, 75. For the new building see Pastor vol. 19, 250; and for its decoration see Rosanna Barbiellini Amidei, “Le decorazioni del Collegio Romano: ‘Lo sforzo Gregoriano 1581 – 1585’,” in \textit{Il Collegio Romano dalle origini al Ministero per i Beni e le Attività Culturali}, ed. Claudia Cerchiai (Rome: Istituto Poligrafico e Zecca dello Stato, Libreria dello Stato, 2003), 201-264.
\end{footnotesize}
Boncompagni pope also gave a substantial endowment to the Collegio, a part of which was used to purchase new astronomical instruments and other scientific devices.  

So involved was Gregory in the advancement of education in the Papal States and elsewhere that his biographer Maffei made special mention of his restoration of “the good studies and the most sublime sciences” to Italy. Moreover, Marco Ruffini and Claudia Cieri Via note that although the major advancements in science were happening in northern Europe, Gregory sought to match these developments by inviting innovative scholars to Bologna and Rome, including those mentioned above. The pope’s interest in contemporary science permeated his pontificate and influenced many of his artistic commissions, and the Sala Bologna should be considered within such a context. Here the use of cartography, history (via the painted figures in the *quadratura*), allegory, and emblems illustrate an overall theme of scientific inquiry. The disciplines of mathematics, celestial and terrestrial cartography, geography, astrology/astronomy, and natural philosophy are each represented visually. Furthermore, the skillful practice of each was necessary to create the painted decoration. All together, these frescoes, especially when considered with those in the Galleria delle Carte Geografiche and the Terza Loggia, visually demonstrate the importance Gregory placed upon these advanced branches of learning.

In addition to this unmistakable iconographic celebration of contemporary science, the decorative program of the Sala Bologna reveals another profound message. The room’s combination of religious and scientific iconography, together with the physical location of

533 For the endowment see Pastor vol. 19, 250. For the scientific equipment see Baldini, 143.
534 “Fu però propria del solo Gregorio di aver ristabilito nell’Italia i buoni studi e le scienze più sublimi.” Maffei vol. 2, 459.
535 Ruffini and Via, 12.
536 For a similar argument see Fiorani 2011, 15-16; Fiorani 2005, 149; and Fiorani 2004, 182-183.
the room within the Papal Palace, reveals Gregory’s employment of scientific practice as an aid to the Counter Reformation.

Science as a Way to Know God

Post-Enlightenment historiography on the relationship between science and religion, specifically that of Catholicism, traditionally dictates that the two were continuously in doctrinal conflict. Indeed, one need only consider the burning of Giordano Bruno (1600) or the trial of Galileo (1633) to get a sense of the strict religious atmosphere of seventeenth-century Italy. Although perhaps one of the most significant events in the history of science and Catholicism, the controversy of Galileo is not demonstrative of the entire relationship however, and therefore more recent literature has focused on the Church’s involvement with pre-Galilean scholarship. The result is a more nuanced historiography, one that demonstrates that science and Catholicism often coexisted peacefully. Furthermore, as


Lindberg notes, the Church was frequently the biggest patron of science, although it was commonly used as a handmaiden to suit the Church’s specific needs.\footnote{Lindberg 1992, 218-234; and Lindberg, “Science as Handmaiden: Roger Bacon and the Patristic Tradition,” \textit{Isis} 78 (1987): 518-536.}

St. Paul was the first to suggest that the study of nature was useful as a way to reach divine understanding. In Romans 1:20 he describes how the divinity and supremacy of God is revealed in all things He has created, and as such one should strive to understand nature in order to understand the power of God. St. Augustine expands upon this idea in his \textit{De doctrina christiana}, suggesting that the observation of plants, animals, stones, and various other natural objects is an exegetical aid for understanding Scripture.\footnote{Augustine of Hippo, \textit{On Christian Doctrine}, trans. J.F. Shaw (New York: Dover, 2009), II.29, 39. See also Lindberg 1992, 150-151.} Albertus Magnus (c. 1200 – 1280), a German Dominican friar, agreed with Augustine and suggested not only that natural philosophy was a critical aspect of theological study but that science was a handmaiden for religion.\footnote{For Albertus Magnus and science see Lindberg 1992, 228-231; Lynn Thorndike, \textit{History of Magic and Experimental Science} (New York: Columbia University Press, 1941), vol. I, book V, 517-592; William A. Wallace (2008A), “Albertus Magnus, Saint,” in \textit{Complete Dictionary of Scientific Biography}, vol. 1, 99-103; and James. A. Weisheipl, ed., \textit{Albertus Magnus and the Sciences} (Toronto: Pontifical Institute of Mediaeval Studies, 1980).} The Dominican performed several empirical studies of nature, and his writings, published in the nineteenth century, cover a diverse range of topics including logic, theology, botany, geography, astrology, astronomy, mineralogy, chemistry, zoology, physiology, and phrenology.

Another medieval clergy member in support of science was the English Franciscan Roger Bacon (c. 1214 – 1294).\footnote{For Bacon see Roger Bacon, \textit{The Opus Majus of Roger Bacon}, ed. John Henry Bridges (Cambridge: Cambridge University Press, 1897); Lindberg 1992, 225-227; Lindberg 1987, 518-536; and Thorndike vol. 1, book V, 616-691.} A major proponent of empiricism, Bacon believed that science was one of God’s many gifts to mankind, and moreover, that it was necessary to understand the intricacies of Scripture. He argued that because God created nature, it could
never be in conflict with Him, and thus any discrepancies that arose between the two disciplines were the result of poor translations within various texts.\footnote{Lindberg 1992, 226-227.}

Thomas Aquinas, a student of Albertus Magnus, also argued the merits of natural philosophy and held the practice in high regard.\footnote{For Aquinas and Natural Philosophy see Lindberg 1992, 231-234; Thorndike vol. I, book V, 616-691; William A. Wallace (2008B), “Aquinas, Saint Thomas,” in Complete Dictionary of Scientific Biography, vol. 1, 196-200; and Wallace, “St. Thomas’s Conception of Natural Philosophy and its Method,” in La Philosophie de la nature de Saint Thomas d’Aquin (Vatican City: Pontificia Editrice Vaticana, 1982), 7-27.} The theologian commented on various scientific works of Aristotle, including the De caelo and Meteorologica. Additionally, he sided with the ancient philosopher and suggested that natural philosophy was especially useful for solving metaphysical questions. In his own work, the Summa contra Gentiles, Aquinas explains that because God created everything, the sciences—that is, the study of nature—are a way of reaching the divine.\footnote{Thomas Aquinas, Contra Gentiles, ed. Joseph Kenny, trans. Anton C. Pegis, James F. Anderson, Vernon J. Bourke, and Charles O’Neil (New York: Hanover House, 1955-1957), III.25, 41.} Essentially the theologian argues that nature, if understood correctly, reveals God.

As Fiorani has noted, the opinions of Augustine and Aquinas helped inspire a group of Post-Tridentine reformers to use the study of nature as an essential aspect of divine meditation, and to this argument should be added the thoughts of Bacon and Albertus Magnus.\footnote{Fiorani 2011, 16; Fiorani 2005, 150; and Fiorani 2004, 55-56.} These theologians provided the authoritative religious endorsement for the natural sciences—including botany, anatomy, and astronomy—that were flourishing in the sixteenth century. One of the most influential supporters of this movement was Gabriele Paleotti.\footnote{The bibliography for Paleotti is large, but the most relevant sources for this discussion include A.W.A. Boschloo, Annibale Carracci in Bologna: Visible Reality in Art after the Council of Trent (Maarssen: Gary Schwartz, 1974); Fiorani 2011, 16-18; Fiorani 2005, 150-157; Pamela Jones, “Art Theory as Ideology: Gabriele Paleotti’s Hierarchical Notion of Painting’s Universality and Reception,” in Reframing the Renaissance: Visual Culture in Europe and Latin America, 1450-1650, ed. Claire J. Farago (New Haven and London: Yale University Press, 1995), 127-139; Robert D. Meadows-Rogers, The Vatican Logge and their Culminating Decorations under Pius IV and Gregory XIII: Decorative Innovation and Urban Planning before Sixtus V (PhD dissertation, Chapel Hill, 1996), 255-256; Anne}
Christian’s education. Moreover, he believed that proper knowledge of nature was a channel for understanding the divine, and as such he recommended the study of the stars, the winds, and of various animals and trees, or in other words, the sciences of astronomy, anemology, zoology, and botany. Accordingly, Paleotti had his own botanical garden and gathered samples on his travels throughout his diocese. Moreover, he supported several prominent scholars, including Aldrovandi, Danti, and the anatomist Charles Varolio.

Gregory XIII filled his court with innovative astronomers, botanists, and other natural philosophers, and encouraged the examination and propagation of their work. Paleotti’s enthusiastic promotion of the sciences as an aid to divine contemplation additionally provided the basis for the Boncompagni pope’s favorable opinions on scientific inquiry. Paleotti and Gregory were intimately acquainted; each was educated at the University of Bologna and participated in the Council of Trent. Moreover, they both considered Cardinal Charles Borromeo a leader of spiritual reform in Post-Tridentine Milan. Additionally, Cardinal Guglielmo Sirleto, Gregory’s papal librarian and chief advisor on scientific matters, including the calendar reform, was also an intimate of the Bolognese bishop.

The usefulness of scientific enquiry as a religious tool first prescribed by St. Paul, and later practiced and promoted by prominent members of the clergy such as Paleotti, directed

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549 As noted in Paleotti’s treatise, 299-300. See also Muraoka, 47.


551 Boschloo, 111; Fiorani 2011, 17; and Fiorani 2005, 152, 156.

552 For Sirleto, see Pastor vol. 19, 259.
the goals of the Boncompagni papacy and influenced the pope’s artistic commissions. As Pastor notes, “Gregory XIII, who was himself a scholar of distinction, and even in his old age devoted to study, in spite of the burdens of the pontificate, saw a powerful means of restoring to the Church her ancient splendor in the promotion and revival of learning.”

Following the instructions of Augustine, Bacon, Albertus Magnus, and Aquinas, the Boncompagni pope therefore adopted the opinion that the study of God’s creation via empirical observation should play a key role in the Counter Reformation.

Gregory’s opinion of science finds a literal translation in a papal medal commemorating the Collegio Romano [fig. 175]. Encircling the reverse of the coin is the legend BONAS ARTES ALIT, ET VERAE RELIGIONI SVBIICIT, “Gregory nourishes the liberal arts and under him they support religious truth.” In the center is an allegorical depiction of Religion, seated high upon a throne and holding a cross. Surrounding her below are the allegories of Theology, Astrology/Astronomy, Arithmetic, and Poetry, each of whom kneels in reverence to Religion and offers her gifts of service, including a flame, globe, compass, and book, respectively. Although there is no known written record of Gregory’s support of scientific practice as an ecclesiastical tool, the iconography and the inscription on this medal provide visual evidence on the topic.

Similarly, the decoration of the Sala Bologna validates the notion that empiricism will lead to a greater knowledge of the divine. The scientific imagery—seen in the terrestrial and celestial maps, the figures in the quadratura, and the emblematic friezes—combined with the decretal scenes, which represent religious history, provides an image of scientific and

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553 Pastor vol. 19, 259.
554 For this medal see Bonanni, medal XXXIX, 357-358.
555 My thanks to Brad Bouley for his generous help with this translation.
556 A similar argument can be made for the decoration of the Galleria delle Carte Geografiche and the Terza Loggia (on which see Schulz 1987, 118-119), and the Torre dei Venti (on which see Courtright 2003, passim).
religious harmony. Moreover, two iconographic details in the room reveal Gregory’s belief that science was a key instrument of the Counter Reformation. To the left of the city map on the southern wall, and below the scene of *Gregory IX Delivering to the Bolognese Doctors the Codex of the Decretals*, is a painted cluster of golden objects representing learning, including an armillary sphere, two books, and two laurel wreaths. This grouping does not belong to either of its bordering subjects and therefore it exists independently as an allegory of the liberal arts. Given that the decretal scenes represent religious history, the subordinate position of this scientific allegory creates a duplication of the message found in the abovementioned papal medal. Here, scientific knowledge is placed in a foundational position of the decretal scene and therefore reads as a symbolic visualization of science’s support of religion.

A more personal message is found below the city map within the emblematic frieze on the same wall. The left fifteen panels contain scientific instruments and the right eight feature ecclesiastical objects. Their combination within the same frieze demonstrates a self-conscious papal concern that the two be shown to coexist fruitfully, and their placement below the city map and decretal scenes supports the notion of science’s usefulness for religion. Moreover, situated in the middle of the frieze between the two categorical groupings is the Boncompagni dragon holding a mirror. Such a deliberate ordering and placement implies that Gregory is the key to the two disciplines—and it is he who will bring the two together. As head of the Catholic Church he sanctions the use of scientific tools to study nature and grants that those who make such inquiries will be rewarded with a greater understanding of the divine.
Paleotti’s Discorso

Gabrielle Paleotti played an additional and key role in Post-Tridentine attitudes towards science. In his treatise, *Discorso intorno alle imagini sacre e profane* (1582), he elaborates upon the guidelines for religious art that were dictated during the twenty-fifth session of the Council of Trent. In response to the unfavorable attitudes of the Protestants towards sacred imagery, one of the objectives of the Council was to reaffirm the authority and utility of such work as a pedagogic tool.\(^{557}\) This Tridentine decree was limited and vague, however, and therefore many treatises on the topic were published, including Borromeo’s *Instructiones fabricate et supellectilis ecclesiasticae* (1577) and Paleotti’s aforementioned text. These works outlined the appropriate subjects and styles. Images of the saints, for example, should be accurate, clearly identifiable, and without lasciviousness.

The majority of Paleotti’s *Discorso* is dedicated to the proper form of religious iconography and how such imagery should be truthful so as to educate the illiterate viewer.\(^{558}\)

Unique to the Cardinal’s treatise is his chapter dedicated to the usefulness of secular images for spiritual contemplation.\(^{559}\) Here Paleotti describes how such representations of God’s creation, if understood correctly and meditated upon properly, could help one reach an understanding of the divine.\(^{560}\) Images of this type include representations of geography, the sky and stars, cities and countries, buildings and fortifications, animals, plants, stones, valleys and rivers, and “all those things that are read and taught in the public academy, and that St.

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\(^{558}\) For a concise treatment of Paleotti’s treatise and his artistic opinions see Jones, 127-139. See also Boschloo, 127; and Muraoka, 29, 36.

\(^{559}\) Chapter 24: *Delle pitture profane che rappresentano varie cose, come guerre, paesi, edifici, animali, arbori, piante e simili.* See also Fiorani 2011, 17-18; Fiorani 2005, 154; Jones, 127-139; Muraoka 46-47; and Olmi and Prodi, 226-227.

\(^{560}\) Paleotti, 354.
Augustine says should not be forbidden to a clerical doctor, but are necessary [for his learning].” The Cardinal argued that a learned viewer who looked at such a painting would not merely see a map or landscape or menagerie of animals, but would be able to metaphysically contemplate each aspect of the image and reach an understanding of God’s presence in everything depicted.

The spiritual use of natural imagery is inherently connected to the Cardinal’s notion that one should personally observe nature to understand God and His creation. As both Andrea Battistini and A.W.A. Boschloo note, Aldrovandi advised Paleotti on this section of the Discorso, likely suggesting to the Cardinal different types of appropriate imagery. Moreover, Aldrovandi’s own Avvertimenti del Dottore Aldrovandi all’Ill.mo e R.mo Cardinal Paleotti sopra alcuni capitoli della Pittura of 1581 reinforces Paleotti’s notion that paintings of the natural world reveal God. Although the natural philosopher and the Cardinal used images of nature for differing objectives—to reproduce nature for study and to recreate God’s creation, respectively—both required images that were of the highest accuracy. Similar to the Tridentine decree concerning the correct use of iconography and decorum in sacred paintings, Paleotti argued that a secular or scientific image had to be accurate in order to most truthfully represent God.

561 “… tutte quelle cose che sono permesse che nelle accademie publiche si leggano et insegnino agli altri e che s. Agostino vuole che ad un dottore ecclesiastico siano non solo non proibite, ma anco necessarie.” Paleotti, 356.
562 The Cardinal placed such great esteem on cartographic imagery that in 1572 he commissioned Cherubino Ghirardacci to create three maps of Bologna for his palace. See Fiorani 2011, 16-17; and Fiorani 2005, 151.
563 Paleotti, 384-385. See also Fiorani 2011, 18; Fiorani 2005, 154; and Jones, 135-136.
564 Muraoka, 46.
565 Battistini 2003, 21; and Boschloo, 111.
567 For the importance of accuracy see Battistini 2003, 21; Franco Farinelli, “Bononiiensis dicte: un racconto di tre città,” in La Sala Bologna nei Palazzi Vaticani, 77; Fiorani 2005, 153; and Jones, 133.
Fiorani argues that Paleotti’s theories of secular imagery may have played a critical role in the decoration of the terrestrial maps in the Sala Bologna. Indeed, the accuracy of the city map, as well as the details of fortification and the inclusion of streets and waterways, follows exactly the descriptions of the Discorso. The topography of the countryside, including rivers, fields, and mountains, additionally demonstrate the variety of God’s creation. To this argument should be added the celestial ceiling as well as the frieze of animals painted below the countryside map. Paleotti explicitly mentions images of the “sky and stars” in his description of appropriate images, and the cartographic accuracy of the ceiling in the Sala Bologna is one of its predominant features. Additionally, the frieze of various plants and animals below the countryside map not only represents the agricultural richness of the Bolognese region, but also demonstrates the variety of God’s creation.

Although the Discorso was not published until 1582, Paleotti circulated a first draft to a small group of friends, including Aldrovandi and the artist Prospero Fontana, in 1578. However, given the Cardinal’s personal involvement in the Council of Trent, it can be assumed that he formulated his arguments regarding the proper use of art prior to publication. Moreover, his close relationship with the Boncompagni pope cannot be overlooked. Taking into consideration their matching views on reform and the usefulness of science, it is likely that the two exchanged ideas with one another and that Gregory agreed with Paleotti’s arguments for the usefulness of secular imagery. The cartographical and emblematic decoration of the Sala Bologna therefore is Gregory’s testament to the validity of secular imagery.

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568 Fiorani 2005, 152-157. See also Fiorani 2011, 18. Meadows-Rogers, 255-256, argues instead that Paleotti had the decoration of the Sala Bologna in mind while writing the section of secular imagery in his Discorso. This seems less likely, however, given that the Cardinal would have discussed Gregory’s frescoes as an illustrative example of his theories.

569 For the commentary see Muraoka, 27; and Prodi 1959-1967, vol. 2, 531-535.
Paleotti’s *Discorso* and the pope’s own endorsement of the Counter-Reformatory value of scientific imagery.

*The Goal of Peace and Prosperity*

When the decoration of the Sala Bologna is considered as a whole, I argue that yet another important theme is revealed. Thus far I have discussed Gregory’s desire to use empirical investigation and scientific imagery as a tool of the Counter Reformation, and how these two notions are represented visually in his dining room. Through a complex combination of iconography, the decorative program also presents the outcome of science and religion working together: a peaceful and prosperous earthly realm that is ruled by the heavens above. Each painted aspect of the room is devoted to religion, science, or the consequence of both, and together this decoration illustrates Gregory’s reformatory goals.

Completed for the Jubilee of 1575, during which an increasing number of important visitors would be able to gaze upon Sabatini’s decoration, the frescoes of the Sala Bologna therefore act as an advertisement of what the Boncompagni pope hoped to achieve during his pontificate and how he sought to achieve these goals.

As mentioned in the countryside section at the beginning of this chapter, the theme of the western wall is similar to Lorenzetti’s earlier Sienese fresco *Allegory of Good and Bad Government*. In the Sala Bologna the Bolognese countryside represents peace and prosperity through abundance; the detailed map flanked by the allegories *Pacis* and *Annona* above a frieze of agricultural products makes this clear. The depiction of this particular section of the Emilia-Romagna region has a personal connection to Gregory XIII, given its representation of an idealized contemporary portrait of the area from which he hails. More generally, from the perfected nature of the map it can be surmised that the good government and prosperity
displayed in the countryside demonstrates what Gregory as pope hoped to achieve in Bologna and the Papal States at large through the means of successful agricultural reforms.

Similarly, on the eastern wall the figures of Securitas and Iustizia represent two other necessities for, and the consequences of, a peaceful realm. These allegories frame not Bologna but instead the real-life views of the expansive panorama of the city of Rome. This resulting juxtaposition supports the idea that the goals of Gregory’s papacy were meant not only to benefit his ancestral home but the entirety of the Catholic world.

Bononia, enthroned on the northern wall below the perspectival view of Bologna, represents the city itself. The numerous instruments of learning painted by the allegory’s feet and within the emblematic frieze below suggest an even more specific meaning: the importance of the University of Bologna. Given that the majority of the tools depicted are scientific in nature, I argue that it is the scientific and empirical heritage of the University’s program that Gregory wished to celebrate.

On the opposite wall, the representation of the city of Bologna pays homage to Gregory’s hometown and represents contemporary achievements in science. This theme becomes clear by the advanced cartography used to produce the map, and by the inclusion of numerous scientific instruments clustered below the historical scene on the left and in the emblematic frieze below. The flanking scenes that visualize two significant events in Bolognese and Church history, as well as the upper emblematic frieze, represent the other major theme of the southern wall: a representation of the Catholic Church.

Finally, the ceiling itself further suggests the importance of science, especially cartography, astrology/astronomy, and philosophy. More specifically, the entire thematic program of the room is visually summarized in the intrados of the vault. Here the mythological and scientific figures sit below pergolas intertwined with various types of
vegetation. Each species of plant is carefully described through paint, demonstrating an empirical attitude towards nature. Moreover, the specific plants were chosen to bear thematic significance. As mentioned in Chapter 2, the foliage includes laurel, roses, convolvulus, and olives. Not merely decorative, these species were chosen for their symbolic associations with the liberal arts, the Catholic Church, and peace. Together with the painted figures that represent various historical aspects of the celestial sciences, the painted vegetation symbolizing religion and peace presents a visual summation of the entire decorative program in the room.
Chapter 4: A Glimpse of the Stars: Celestial Murals in Early Modern Italy

In his seminal 1922 essay “Italienische Kunst und internationale Astrologie im Palazzo Schifanoja zu Ferrara,” Aby Warburg recognized the significance of astrological iconography in Renaissance art.\(^570\) In this work he interpreted the wall frescoes in the Sala dei Mesi as images of the planetary gods and celestial decans presiding over the cycle of the months and Borso d’Este’s prosperous reign. Shortly thereafter Fritz Saxl and the astronomer Arthur Beer deciphered the complex symbolism painted on the ceiling of the Sala di Galatea in the Villa Farnesina.\(^571\) Based on the precise organization of the fresco’s iconography, they were able to determine that Baldassare Peruzzi had painted the natal horoscope of his patron Agostino Chigi.

Since these two groundbreaking works, various scholars have written on the importance and interpretation of Renaissance astrological symbolism.\(^572\) Unfortunately these murals are often considered in isolation within the existing literature, and as such their greater contextual significance has yet to be fully explored. To address this lacuna the present chapter will therefore be composed of three parts. I will begin by discussing the different types of celestial murals painted in the Renaissance and explore how each example fulfilled the needs of its patron. I will then examine how the ceiling of the Sala Bologna fits within this tradition. Finally, I will consider all of the frescoes together to determine their symbolic and contextual significance. Developed in antiquity, maintained through the Middle Ages, and revived in the Renaissance, the illustration of astrological motifs has a long

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572 Relevant bibliography will be cited with each ceiling discussed below.
and impressive heritage, and the study of such imagery is a valuable resource for understanding a widespread feature of Early Modern Italian culture.  

Due to the complex celestial iconography of the imagery to be considered I will begin with a brief background of the history of astrology. Distinguishing between the terms astronomy and astrology before the eighteenth century is problematic, as the two were often practiced in tandem. It is also necessary to remember that unlike current opinions of astrology as a pseudo-science the discipline was widely practiced by the common and noble alike. In his astrological treatise the *Tetrabiblos*, Ptolemy succinctly explains the differences between the two celestial sciences:

> Of the means of prediction through astronomy, O Syrus, two are the most important and valid. One, which is first both in order and in effectiveness, is that whereby we apprehend the aspects of the movements of Sun, Moon, and stars in relation to each other and to the Earth, as they occur from time to time; the second is that in which by means of the natural character of these aspects themselves we investigate the changes which they bring about in which they surround.

In other words, astronomy was the calculation of the movements of the planets and other celestial bodies, while astrology interpreted the impact of these movements on one’s life.

The practice of astrology can be separated into two distinct branches, mundane and judicial. Mundane astrology, from the Latin *mundus* for world, was used for predicting natural phenomena such as the weather and return of the harvest. Similar to weather

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573 This chapter will focus on monumental astrological painted murals. A plethora of celestial imagery exists within both sculpture and easel paintings, but such iconography is outside the scope of this dissertation.


576 For the types of astrology and their definitions, see Applebaum, 75-76; and Pingree 1973, 118.
forecasting today it was an inexact science, and oftentimes major storms that were predicted failed to come to fruition. Mundane astrology also played an important role in the practice of medicine, as it was thought that the stars had an influence on the body. As such, astrological charts were created and used to learn about a patient’s health, similar to how a doctor might create a medical history today. Additionally, the stars and their movements, as well as the phases of the Moon, were thought to affect various types of treatments, and therefore a doctor would often consult with an astrologer for the best time to perform an operation or other important treatment.  

Judicial astrology is more complex and consists of four different practices. The first, general astrology, deals with the orientation of the planets and the stars at celestially significant instances, such as during an eclipse or a planetary conjunction. Similar to the belief in celestial omens—the undesirable consequences of the appearance of a comet, for example—these alignments were thought to have a wide-ranging impact on the general population.

The more familiar branch of judicial astrology is natal astrology or genethiology. Here an astrologer would study the sky at the time of one’s birth to create a horoscope that would reveal each aspect of one’s life. Similar in practice is electional or catarchic astrology, when an astrologer would consult the heavens for the most opportune time to

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578 Applebaum, 76; and Pingree 1973, 118.


580 For natal astrology see Applebaum, 76; Page, 31-32; Pingree 1973, 118. Horoscopes will be further discussed in detail below.
commence an important event such as a war or major building project.\textsuperscript{581} The final form of judicial astrology was traditionally the most controversial. Horary, or interrogatory, astrology derives directly from Arabic practices. A client would consult an astrologer with a specific question, and through the consultation of the sky or astronomical tables the astrologer would answer the query based on the position of the stars and planets at that moment.\textsuperscript{582}

Developed in ancient Babylonia, the practice of astrology is found in texts dating as early as c. 1800 BC.\textsuperscript{583} The celestial sciences spread to and flourished in Hellenistic Egypt, and the conquests and travels of Alexander the Great throughout northern Africa and the East brought the science to ancient Greece.\textsuperscript{584} It is through a Greek text, Homer's \textit{Iliad} (usually dated to the eighth century BC), that we get the earliest western description of the constellations. It reads:

[Vulcan] wrought the Earth, the heavens, and the sea; the Moon also at her full and the untriring Sun, with all the signs that glorify the face of heaven- the Pleiads, the Hyads, huge Orion, and the Bear, which men also call the Wain and which turns round ever in one place, facing Orion, and alone never dips into the stream of Oceanus.\textsuperscript{585}

It was only with Eratosthenes, however, that the mythology of the heavens became standardized. In his third-century BC \textit{Catasterismi}, the poet relayed the name of each constellation and recounted its mythological origins and interactions with the others.\textsuperscript{586}

\textsuperscript{581} For electoral astrology see Applebaum, 76; and Pingree 1973, 118.
\textsuperscript{582} For horary astrology see Applebaum, 76; Page, 35; and Pingree 1973, 118.
\textsuperscript{583} For Babylonian astrology, see Francesca Rochberg, \textit{Babylonian Horoscopes} (Philadelphia: American Philosophical Society, 1998).
\textsuperscript{584} The best source for the beginnings of astrology in Greece and Rome is Nicholas Campion, \textit{A History of Western Astrology Volume I: The Ancient and Classical Worlds} (London: Continuum, 2009).
Aratus’ contemporary poem the *Phaenomena* focused on the stars themselves, and is the oldest descriptive work on the position of the constellations and their shapes.\(^{587}\)

Although the poems of Homer, Eratosthenes, and Aratus describe the mythology of the heavens, it was to Ptolemy that the ancient astrologers turned for a practical handbook. Ptolemy’s *Tetrabiblos* was the indispensable guide from the time of its composition into the seventeenth century. The text begins with a description of astrology (as cited above), followed by a defense of the subject, its reliability, and its usefulness. Ptolemy then describes the influence of the various planets and stars, as well as the relationships between them. Mundane astrology is covered in the second book, and the utilization of horoscopes fills the second half of the text. The *Tetrabiblos*, the astrological companion to Ptolemy’s astronomical *Almagest*, establishes the interrelationship between astrology and astronomy in the ancient world. That such a respected astronomer would write an equally thorough treatise on astrology demonstrates the widespread practice of the latter at the time.

Like much of Greek culture, the Romans adopted the custom of celestial prediction, although they were at first apprehensive of the science. For example, in 160 BC Cato composed a warning against the Babylonian star gazers and that they were not to be trusted.\(^{588}\) By the time of the Empire, however, astrology had gained Roman favor and Tiberius was the first of many emperors to employ a court astrologer. There were debates in antiquity about the ruling heavens and mankind’s free will, but it was only with the advent of Christianity that these two notions came to a head.\(^{589}\) Although the stars feature prominently within various aspects of Church belief—for example the Magi following the Star of

\(^{587}\) For Aratus see Chapter 2.

\(^{588}\) For Cato’s warning see Tamsyn Barton, *Ancient Astrology* (London: Routledge, 1994), 32-33; and Campion, 228.

\(^{589}\) For the concept of free will in antiquity see Pingree 1973, 121; and Claudia Rousseau, “Cosimo I de Medici and Astrology: The Symbolism of Prophecy” (PhD diss., New York University, 1983), 47-48.
Bethlehem— and although many important feast days were calculated by aid of stellar and planetary movement, the early Christians were fundamentally opposed to the idea of celestial predetermination. It was with judicial astrology that the Church fathers had the greatest problem, in essence because through judicial prediction astrologers were able to learn the future, which only God was thought to know.

One of the largest opponents to astrological practice was St. Augustine. In his De Genesi ad litteram he warns against astrologers and their predictions, and in the De civitate Dei he defends the foreknowledge of God and the free will of mankind. And yet as Harry Bober has argued, in spite of these and similar arguments, the early Church was unsuccessful at ending the practice of astrology, which by this time was an established part of everyday life. In this context, a system of compromises was reached, and apologists argued that astrology was a way to study the meanings of the celestial bodies through which God exercised his influence upon human life. God’s supreme authority and man’s free will and responsibility were thus maintained while still allowing for the astrological interpretation of

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591 For the calculation of feast days see Kamborian, 129; Page, 41-43; and Seznec, 43.


593 For Augustine and astrology, see Applebaum, 76; and Lindberg 1992, 276.


one’s character as predetermined by the stars. Moreover, although there were attempts to Christianize the constellations, the pagan identities and mythologies survived.\textsuperscript{598}

In the early Middle Ages, astrology was practiced predominantly within monasteries as a method of calculation for feast days and celebrations. In the twelfth and thirteenth centuries, however, the astrological sciences received a boon when an influx of Latin translations were made from imported Arabic editions, including Ptolemy’s \textit{Tetrabiblos}\.\textsuperscript{599} As Erwin Panofsky and Saxl note, the court of King Alfonso in Spain was especially interested in these rediscovered texts, and several editions were translated into Castilian and Latin.\textsuperscript{600} It was also during this time that the major European universities were being founded, and astrology was a core aspect of the mathematics curriculum from the outset and into the seventeenth century.\textsuperscript{601} Students who wished to learn the celestial sciences were educated in astronomy, math, and horoscopy. Additionally, given this contemporary burst in popularity, in his \textit{Summa Theologica} Thomas Aquinas reaffirmed the notion that the study of the stars was useful for determining one’s character but that ultimately God had supreme control.\textsuperscript{602}

Beginning in the fifteenth century with the advent of Renaissance Humanism, astrology was freed from the above-stated early Christian compromises and limitations and

\textsuperscript{598} For example, Gregory of Tours’ \textit{De cursu stellarum} of c. 580 gave Christian identities to the constellations. This practice continued into the seventeenth century with Julius Schiller’s 1627 celestial map, but such manipulations did not have an impact on astrological or astronomical practice. For these examples see Rembrandt Duits, “The Survival of the Pagan Sky. Illustrated Constellation Cycles in Manuscripts,” in \textit{Images of the Pagan Gods: Papers of a Conference in Memory of Jean Seznec}, ed. Rembrandt Duits and François Quiviger (London: The Warburg Institute; Turin: Nino Aragno, 2009), 97. See also Kamborian, 129-130; and Seznec, 50.

\textsuperscript{599} Lindberg 1992, 277; Ovason, 22; Page, 9; Erwin Panofsky and Fritz Saxl, “Classical Mythology in Mediæval Art,” \textit{Metropolitan Museum Studies} 4 (1933): 241; Saxl 1985, 74-75; and Seznec, 51.

\textsuperscript{600} Panofsky and Saxl, 239. For Alfonso see Chapter 2.


the art of interpreting the heavens once again thrived throughout all echelons of society. Similar to those in antiquity, the greatest astronomers of the fifteenth, sixteenth, and seventeenth centuries, including Copernicus, Tycho Brahe, Johannes Kepler, and Galileo, were also adept in astrological practice. Kings, emperors, and popes employed astrologers to foretell the most favorable times for crucial events including elections, building projects, and military campaigns. For example, Julius II commissioned the astrologer Luca Gaurico to construct a horoscope for the best time to lay the foundation stone of new St. Peter’s. Indeed, the popularity of astrology once again became so widespread that many Renaissance popes, including Leo X and Paul III, employed at least one court astrologer.

Further aspects of astrological history and practice will be discussed as needed throughout the remainder of this chapter. Given that the interest in astrology was once again so fully ingrained within daily Renaissance life, the portrayal of celestial iconography became a common pictorial theme.

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603 For astrology in the Renaissance see Bini, esp. 24; Cox-Rearick, esp. 160-161; Maria Pia Donato, “Introduction,” in Conflicting Duties: Science, Medicine and Religion in Rome, 1550-1750, ed. Maria Pia Donato and Jill Kraye (London and Turin: The Warburg Institute and Nino Aragno Editore, 2009), 1-8; Eugenio Garin, Astrology in the Renaissance: The Zodiac of Life, trans. Carolyn Jackson and June Allen (London and Boston: Routledge and Kegan Paul, 1983); Anthony Grafton, Cardano’s Cosmos: The Worlds and Works of a Renaissance Astrologer (Cambridge and London: Harvard University Press, 1999); Corinne Mandel, “‘Starry Leo,’ the Sun, and the Astrological Foundations of Sixtine Rome,” Racer 17 (1990): 17-39; Quinlan-McGrath 1995; Rousseau, esp. introduction, 48-51; and Seznec, 57-59. Not all were in agreement of astrological practice, however. One of the biggest opponents of the time was Giovanni Pico della Mirandola (1463–1494) who wrote the Disputations Against Judicial Astrology, published posthumously in 1494 by his nephew, a follower of Savonarola. The text follows Augustine’s arguments against astrology and maintains that the predictive celestial sciences have no place within Christianity. For Mirandola and his text see Applebaum, 77; and Ernst, 253.

604 For the astrological works of these astronomers see Applebaum, 77.

605 For the horoscope of St Peter’s see Mary Quinlan-McGrath, “The Foundation Horoscope(s) for St. Peter’s Basilica, Rome, 1506: Choosing a Time, Changing the Storia,” Isis 92 (2001): 716-741, esp. 717 for Gaurico’s involvement.

606 For Leo X see Seznec, 57. For Paul III see Alessandro Menghini and Felicita Menghini di Biagio, Paolo III: Pillole e Profezie: Astrologia e medicina alla corte papale del Cinquecento (Perugia: Menghini, 2004), esp. 145; Ovason, 52; and Seznec, 57. For Renaissance popes and astrology in general see Quinlan-McGrath 2001, 717.
Part I: The Tradition of Celestial Iconography

Origins in Antiquity

Celestial ceiling frescoes have a long tradition dating back to antiquity, and although there are no extant monuments, examples of this decoration survive within the histories of ancient authors. There are only a few such descriptions and each is brief and therefore worth quoting in full. In *The Life of Apollonius of Tyana* Philostratus gives an account of the palaces of Babylon:

But they say that they also visited a man’s apartment of which the roof had been carried up in the form of a dome, to resemble in a manner the heavens, and that it was roofed with lapis lazuli, a stone that is very blue and like heaven to the eye; and there were images of the gods, which they worship, fixed aloft, and looking like golden figures shining out of the ether. And it is here that the king gives judgment, and golden wrynecks are hung from the ceiling, to remind him of A drastea, the goddess of justice, and to engage him not to exalt himself above humanity.

This account is especially useful as it describes the ceiling in detail and also indicates that the decoration was frescoed in an audience hall. Such a location suggests that the king in this example wished his visitors to see the heavens under which he ruled.

In Cassius Dio’s *Roman History*, the historian relays Septimius Severus’ campaign against the British:

Severus, seeing that his sons were changing their mode in life and that the legions were becoming enervated by idleness, made a campaign against the British, though he knew he should not return. He knew this chiefly from the stars under which he had been born, for he had caused them to be painted on the ceilings of the rooms in the palace where he was wont to hold court, so that they were visible to all, with the exception of that portion of the sky which, as astrologers express it, ‘observed the hour’ when he first saw the light; for this portion he had not depicted in the same way in both rooms.

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607 Astrological motifs feature in other artistic media, including mosaics and sculpture, but these artworks are outside the scope of this dissertation. For a brief description of this type of work see Hans Gerog Gundel, *Zodiakos: Tierkreisbilder im Altertum, Kosmische Beziehungen und Gegenwart der astrologischen Vorstellungen im antiken Alltag* (Mainz: Verlag Philipp von Zabern, 1992), esp. 114-117; and Panofsky and Saxl, 232.


The portion of the sky that “observes the hour” refers to Severus’ natal horoscope, or a depiction of the sky at the time of his birth. In addition, Cassius Dio also notes that the stars were painted in a public reception room.

Varro’s description of a painted dome in Casinum is found in Book III of On Agriculture:

Inside, under the dome, the morning star by day, the evening star by night, move round the lower part of the hemisphere in such a way as to indicate the hour. In the middle of the same hemisphere, which has a spindle in the center, is painted the cycle of the eight winds…

Alberti comments on Varro’s description, demonstrating not only his fondness for such decoration and also attesting to the familiarity of Renaissance scholars with these ancient descriptions.

Two shorter accounts also provide insight into antique celestial murals. In Martial’s Epigrams the poet describes a room within Domitian’s palace that was decorated with the stars on the ceiling: “Heaven with its stars you, Rabirius, have conceived in your pious soul, who by wondrous art built the mansion of the Palatine. If Pisa shall be set to give Phidian Jove a temple worthy of him, she will beg of our Thunderer these hands of yours.” And finally, in The Twelve Caesars, Suetonius describes the dining room of Nero’s Domus Aurea.

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611 Alberti writes: “To return to the discussion [of vaults]. I am highly pleased by the description given by Varro of the vault at --, which was painted to represent the sky; it also contained a mobile star with a ray to indicate the hour of the day and the direction of the wind outside. I am delighted by such devices.” On the Art of Building in Ten Books, trans. Joseph Rykwert, Neil Leach, Robert Tavernor (London and Cambridge: MIT Press, 1988), Book 7, chapter 11.
“The main banquet hall was circular and [the ceiling] constantly revolved day and night, like the heavens.”

These five descriptions give the modern historian a glimpse into the type of celestial murals painted in antiquity. Philostratus writes of various stars and gods painted in gold on the Babylonian ceiling. Exactly how this imagery was arranged is less clear, but the description suggests that the iconography did not adhere to a realistic arrangement of the constellations. Moreover, the inclusion of the gods indicates a display of celestial symbolism similar to what I will label as “encyclopedic” below. In contrast to this is Cassius Dio’s description of Septimius Severus’ decoration. Here the historian relays a specific arrangement of the stars that form Severus’ natal horoscope. This type of decoration will also be discussed below, under the category of “horoscopic” ceilings. Although very little is actually said about Nero’s ceiling, Suetonius’ observation that the dome rotated in tune with the heavens is similar to Varro’s description, and both imply that a ceiling was painted to accurately mirror the night sky, and as such they fit within my category of “cartographical” frescoes. The ceiling type of Martial’s text is less clear but nevertheless indicates the popularity of this decoration in antiquity.

In addition to descriptions of iconography, these historical accounts are also useful for their indication of the type of rooms for which celestial frescoes were commissioned: a Babylonian audience chamber (from Philostratus), a reception room (Cassius Dio), and an Imperial dining room (Suetonius). It is significant that each of these rooms was a space in which the patron would receive or entertain illustrious guests and visitors. This indicates that powerful patrons of the past wished for their celestial decoration to be viewed by more than their own court or household, and as such imply a propagandistic message.

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Medieval Manuscripts

The Middle Ages saw a shift in the use of celestial iconography, and the walls and ceilings of palaces were no longer decorated with astrological imagery. Instead, the constellations were featured abundantly in mathematical, mythological, and literary manuscripts, leading to a wide diffusion of this imagery in the medieval world.614 Additionally, although medieval horoscopes are certainly known, it was the unspecific depiction of the constellations celebrating the cycles of the months and found within Books of Hours that became ubiquitous throughout the Middle Ages.615 Within these prayer books the signs of the zodiac were associated with the twelve months, while the planets were often connected to the days of the week.

In addition to Books of Hours, the so-called Aratea, or the illustrated manuscript copies of Aratus’ ancient poem the Phaenomena, provide a wealth of medieval astrological imagery.616 The earliest surviving copy of Aratus’ poem dates to the ninth century, and an abundance of copies were made during the Carolingian Renaissance.617 Here the constellations were depicted as individual entities and without concern for stellar accuracy.


615 For books of hours see esp. Page, 45-47.


617 Lippincott 2006, 4; Saxl 1985, 75-76.
As Kristen Lippincott explains, the dilution of astrological imagery as a result of translations from Greek to Arabic to Latin over a period of 1200 years by scribes who often did not fully comprehend what they were copying led to a breakdown of descriptive accuracy. As such, the constellations became decorative images rather than accurate reproductions of the stars in the sky.

Despite the repetitive subject matter, medieval depictions of the constellations varied greatly in regards to figural style and attributes. Given the translation of astrological texts from the Arabic, this imagery often portrays an eastern stylistic influence. For example, a thirteenth-century image shows Hercules with a scimitar instead of the traditional club [fig. 176]. Similar examples abound, showing eastern dress, hairstyles, and weaponry. The constellations were also depicted in contemporary western style, with the dress and attributes of noble men and women or kings and queens. A twelfth-century Hercules appears, as Panofsky and Saxl suggest, like a “Romanesque St. Michael fighting the dragon” [fig. 177]. This contemporary style prevailed into the early fifteenth century, when images of the constellations began to once again resemble the gods of the Greco-Roman world in both style and dress.
Part II: Bringing the Heavens Inside: Renaissance Celestial Murals, 1300-1700

Concurrent with Renaissance Humanism, illustrations of the cosmos moved from the pages of manuscripts and once again onto the walls and ceilings of both public and private buildings and became celebrated images of illustrious patrons. As Janet Cox-Rearick explains, the small fresco in the cupola over the altar in the Old Sacristy of San Lorenzo in Florence (c. 1439 or c. 1442) begins the shift from the popular late medieval and early Renaissance depictions of the Divine Spheres to representations of the constellations and the planets. A beautiful illustration of the Divine Spheres appears in Giusto de’ Menabuoi’s fresco in the Padua Baptistry (1370-1378) [fig. 178]. Here Christ is shown supported by angels against a golden background signifying heaven and presiding over a depiction of the Earth surrounded by the celestial spheres. A similar representation by Giovanni di Paolo in 1445 [fig. 179] demonstrates that this iconography continued into the Renaissance, but it will become clear in the remainder of this chapter that such imagery waned in popularity during the Renaissance and Baroque periods.

The rediscovery and translation of ancient astrological and astronomical texts in the Renaissance led to a boon in popularity of the subject matter, and this stimulated an increase in astrological practice at the time. Similar to other Humanistic themes, this rediscovery also inspired patrons to commission works of art based on Aratus’ *Phaenomena*, Eratosthenes’ *Catasterism*, Hyginus’ *Fabulae*, and Manilius’ *Astronomicon*. For these texts see Chapter 2. This collection of ancient poetry provided the names, descriptions, and myths of all of the constellations and planetary gods, and as such these works became the source books for artists charged with representing

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624 Cox-Rearick, 166.
625 For these texts see Chapter 2.
celestial themes. In addition, Alberti’s aforementioned fondness for the celestial décor described by Varro attests to the familiarity of those in the Renaissance with ancient astrological ceiling frescoes.

Given such ancient precedents it is not surprising that Renaissance patrons began to avidly commission similar works of art, and this iconography is found throughout the Italian peninsula between the fourteenth and seventeenth centuries. In light of the widespread use of astrological imagery, Cox-Rearick argues that there is little commentary from Vasari and others due to the abundance of examples. In other words, celestial murals were so prevalent in the Renaissance that they would have been easily understood by contemporary viewers and therefore did not warrant discussion. The fact that the popes themselves commissioned such imagery in the Palazzo Vaticano demonstrates its ubiquity, and by the 1480s Pope Sixtus IV ordered the ceiling of his newly built Sistine chapel to be painted with brilliant gold stars against a solid blue background [figs. 180, 181].

Indeed, the simplest method of portraying the sky is with a painted blue wash and golden stars. This is exemplified not only by the original Sistine ceiling, but also by Giotto’s Scrovegni Chapel (1303-1306) and countless other examples. Four other techniques developed for depicting the heavens, each with its own style, meaning, and significance, and each of the examples I discuss below falls within one of these categories.

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626 Bornoroni, 36; and Cox-Rearick, 169.
627 Cox-Rearick, 161.
The first group can be described as encyclopedic. These murals contain all or some of the constellations, the zodiacal constellations, the planets, and the planetary gods. The composition of these frescoes can vary, but none must present an accurate arrangement of the sky. As will become clear below, a common thread among encyclopedic frescoes is a greater emphasis on the mythology of the constellations and planets similar to that found in the aforementioned medieval manuscripts. Indeed, like their predecessors from the Middle Ages, the highlight of these frescoes is the figures of the constellations rather than the stars within them, if these stars are depicted at all. As will be discussed below, encyclopedic frescoes have a wide range of meanings, but they are emphatically neither a horoscope nor a map of the sky.

The second category consists of horoscopic ceilings, or those that contain the planets and/or zodiacal constellations relevant to the horoscope of a patron, but which again are not accurate representations of the heavens. As I will demonstrate, a horoscopic ceiling need not contain an accurate or complete horoscope, but may include merely a select few constellations or planets that are contextually arranged so that their personal significance to the patron is identifiable. For example, the ceiling in the Sala di Apollo in the Palazzo Pitti and that in the Sala di Romolo in the Palazzo Altieri feature other narratives that dominate the fresco both in terms of the visual composition as well as the overall intended meaning. However, these two ceilings each contain explicit horoscopic references and thus they are included within this category.

I define the third group as commemorative for those frescoes that use astrological iconography to celebrate an event. Through the precise arrangement of constellations and planets, these murals record a unique moment of time. Inherent to this category is an accurate representation of the celestial bodies; however, of the three examples known, only a
small portion of the sky is depicted and as such I do not label them as cartographic. In fact, of cartographic frescoes, the fourth and final category, the Sala Bologna is the only example. Although this ceiling contains all of the constellations, it does not fall under the encyclopedic category because the stars are arranged accurately in correspondence to their location in the sky. Moreover, it is not a commemorative fresco as there are no planets present, and thus an exact moment in time is not defined. This latter fact also precludes the inclusion of any horoscopic element.

Given the prevalence of mythological iconography in the Renaissance, astrological frescoes can be difficult to define. The planetary gods, for instance, are featured in a plethora of murals that I have chosen not to include. For example, each of the planetary gods—that is, Diana (the Moon), Mercury, Venus, Apollo (the Sun), Mars, Jupiter, and Saturn—is included in Raphael’s *Council of the Gods* frescoed in the center of the ceiling in the Loggia of Psyche in the Villa Farnesina (1517-1518) [fig. 182]. These same gods are also featured in Giovanni Lanfranco’s later *Council of the Gods* on the ceiling of the Sala della Loggia in the Villa Borghese (1620s) [fig. 183]. Neither of these two examples include any reference to astrology or astronomy, however, other than the gods themselves. Moreover, the overarching narrative of these two paintings is the mythology of the gods rather than their planetary rulerships. Therefore, for a fresco of the planetary gods to be included in a discussion of encyclopedic ceilings, the zodiac or other constellations must be present so as to indicate a clear astrological context. For this reason, with the exception of the abovementioned Sala di Apollo, I have not included the other planetary ceilings in the Palazzo Pitti. Additionally, images of Apollo and Aurora are excluded for the same reasons.

Horoscopic iconography is often subtle and it need not be a significant part of the overall narrative to be correctly interpreted, and thus I have included frescoes that may
traditionally be defined as mythological or allegorical. Such is the case with the aforementioned ceiling in the Sala di Romolo, where the main narrative depicts the apotheosis of Romulus, yet the inclusion of celestial iconography referring to the horoscope of several members of the Altieri family gives it astrological significance.

Additionally, although I focus almost exclusively on ceilings, three wall cycles are included: those in the Paduan Palazzo della Ragione, the Ferrarese Palazzo Schifanoia, and the Mantuan Palazzo d’Arco. The iconography and inherent meaning of each of these examples is overwhelmingly astrological and thus their exclusion is impossible. Additionally, although the majority of examples are fresco, a few, including *The Apotheosis of Cosimo I*, are oil paintings mounted on a ceiling, and thus my frequent use of the term murals to include all painted media. To be thematically consistent, however, I only examine large displays of two-dimensional media, i.e., painting and mosaic, on either a ceiling or wall. Such murals serve a different function than other two-dimensional artworks, and therefore I do not examine celestial iconography found in manuscripts, easel paintings, drawings, or prints.

Moreover, I have omitted three-dimensional works such as Agostino di Duccio’s sculptural relief cycle in the Cappella dei Pianeti in the Tempio Malatestiano (1540s) for Sigismondo Malatesta, and the terracotta roundels of the months painted c. 1450-1456 by Luca della Robbia for Piero de’ Medici’s *studiolo* in the Palazzo Medici.629

Finally, I have limited my analysis to works painted between 1300 and 1700 so as to include examples from the early and high Renaissance as well as the Baroque periods. The

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remainder of this chapter will therefore perform three overlapping functions. The first is an exploration and comparison of astrological murals sorted by the abovementioned criteria. I will present the iconography and commission of one primary example for each category followed by a brief outline of other illustrations arranged chronologically so that comparisons are possible. After each mural has been described, I will discuss the meaning of this iconography as well as any evolution of style. The relationship between all extant astrological murals has yet to be fully explored, and the results gained from my analyses will shed light on this understudied but crucial theme in Early Modern Italian art.630

Building upon these conclusions I will examine the iconography of the Sala Bologna and demonstrate how it does and does not fit within this larger tradition. Such a comparison will make clear the unique aspects of Gregory XIII’s ceiling. Finally, an explanation for the ubiquity of astrological murals in the Renaissance has yet to be adequately argued. By examining the location, function, and dating of each example I will elucidate the attraction of astrological imagery for patrons of the fourteenth through seventeenth centuries.

Encyclopedic Murals

The Sala dei Mesi

The comprehensive tradition of encyclopedic wall paintings derives from the cycles of months illuminated in medieval and early Renaissance Books of Hours and calendars.631 The placement within the rooms of powerful Renaissance rulers added the additional meaning of the patron’s figurative claim to control over nature, just as he presided over the territories within his actual domain. The most famous example of this type is Francesco del

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630 Such comparisons will be made through a summary of the existing literature of each example. It is not my intent to make any major argumentative contributions here. Instead my analysis will focus on the patterns that emerge from this data and the significance of these results.
631 Bini, 24; Saxl 1985, 80-81; and Warburg 1988, 236, 240.
Cossa, Cosmè Tura, and Ercole de’ Roberti’s decoration of the Sala dei Mesi in the Palazzo Schifanoia in Ferrara [fig. 184]. Painted for Duke Borso d’Este in c. 1470, these frescoes were rediscovered under a layer of whitewash in the nineteenth century, and as such many areas of the program are illegible.

Separated by painted Corinthian pilasters, the walls of the Duke’s reception hall are divided into nineteen vertical sections, twelve of which represent the months of the year. The calendar cycle begins on the east wall with the month of March and wraps around the room as if the pages of a manuscript were enlarged and hung on the walls. Indeed, the organization of each section of the Ferrarese decoration recalls that of a Book of Hours with the astrological elements at the top of the composition and the ruler and his court below.

For example, the illuminations in the celebrated *Très Riches Heures du Duc de Berry* (1412-1416) feature the zodiacal constellations associated with each month as well as the ruling planetary guard at the top of each page [fig. 185]. Presiding under the Limbourg Brothers’ painted

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633 The remaining panels represent various aspects of court life. See Lippincott 1994, 93.

stars is the Duke and his court occupied with various aristocratic activities about his palace and land, demonstrating his peaceful and prosperous reign.

Following this organizational pattern, each of the painted months in the Sala dei Mesi is divided into three registers. The upper register features a triumphal carriage with an Olympian god surrounded by various attributes. As Aby Warburg argued, this pairing of the Olympian gods with the calendar comes from Manilius and replaces the more common relationship of the planetary deities with each month. The middle register of each section contains the sign of the zodiac associated with that particular month, as well as that sign’s three decans. Finally, the lower portion is filled with Borso d’Este and his court engaged in different activities of daily life appropriate to each month. As Margaret Ann Zaho has suggested, Tito Vespasiano’s *The Borsiad*, an ode to the Este duke, likely provided the textual source for the iconography of the court scenes. In the poem, the gods convened and chose Borso to bring peace and prosperity to Ferrara. The lower registers of the wall frescoes therefore not only offer a glimpse into Ferrarese court life but also act as a demonstration of the duke’s just and successful rule.

Located on the east wall, the month of April is one of the best-preserved sections of the mural and provides a clear example of the iconography of each month. At the top is Venus riding a cart pulled by two swans [fig. 186]. Surrounding her are amorous couples,

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635 Warburg 1988, 243, 249. See also Bertozzi, 34; and Kristen Lippincott, “The Iconography of the Salone dei Mesi and the Study of Latin Grammar in Fifteenth Century Ferrara,” in *La corte di Ferrara e il suo mecenatismo*, ed. Marianne Pade (Copenhagen: Museum Tuscalanums, 1990B), 95-96. Manilius II.439-447 lists the relationship of the Olympians and the months as follows: January with Juno; February with Neptune; March with Minerva; April with Venus; May with Apollo; June with Mercury; July with Jupiter; August with Ceres; September with Vulcan; October with Mars; November with Diana; and December with Vesta.

636 The month and zodiacal pairings come from the yearly path of the Sun and are as follows: Aries with March; Taurus with April; Gemini with May; Cancer with June; Leo with July; Virgo with August; Libra with September; Scorpio with October; Sagittarius with November; Capricorn with December; Aquarius with January; and Pisces with February. For the meaning of the decans see Appendix 4. There is a considerable amount of literature discussing the presence of the decans as they are not commonly represented. See Bertozzi 1999, 20, 30; Jaffé; Lippincott 1994; Lippincott 1992; Vescovini, 75-78; and Warburg 1988, 237, 239.

637 Zaho, 118.
the Three Graces, and a plethora of rabbits, roses, and doves, all representing love [fig. 187]. In the middle register is Aries the ram marked with golden stars and surrounded by his three decans. A representation of a courtly hunt led by Borso d’Este appears at the bottom of the fresco and symbolizes the aristocratic activities appropriate to April and the Duke’s maintenance of peace. The remaining months follow this pattern and combine to illustrate the annual passing of the zodiac, the months, and the seasons, and also how Borso d’Este and his court fit within this cosmic cycle.

Other Examples

Similar to the organization and theme of the Sala dei Mesi is Giovan Maria Falconetto’s 1520 decoration on the walls in the Sala dello Zodiaco in the Palazzo d’Arco, Mantua, for Gian Luigi Gonzaga [fig. 188]. The walls are divided into twelve fictive arches separated by painted pilasters of colorful grotteschi. Each month is crowned with the corresponding zodiacal constellation depicted against a blue sky and below are scenes of the mythological origin of each zodiacal sign as well as the labors of each month. In the month of June, for example, Cancer crowns the scene of Hercules battling the Lernaean Hydra [fig. 189]. Sent by Hera to help defeat Hercules, the crab was ultimately killed but awarded for his bravery by the goddess and placed in the sky. The painted scene takes place in front of the Colosseum, and to the left farmers work the fields. The remaining decoration of the sala

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638 For this iconography see Warburg 1988, 244.
639 For the theme of peace see D’Ancona and Gnudi, 12.
consists of medals of various Roman emperors, assorted *grotteschi*, scenes from Ovid’s *Metamorphoses*, and various allegorical figures painted in grisaille. The predominance of ancient Roman iconography, including the many landmarks represented in the monthly narratives, suggests the desire of Gian Luigi to be linked to the glorious past.

The third wall fresco is also the earliest. Commissioned by the Comune di Padova in c. 1314, Giotto painted the walls of the Gran Salone in the Palazzo della Ragione in more than 330 individual sections. After a fire destroyed the ceiling and much of the walls, Nicolò Miretto and Stefano da Ferrara reconstructed the frescoes between 1425-1440 [fig. 190]. Similar to the previous two examples, the Paduan decoration is arranged by month, albeit without a system of arches and fictive pilasters. Additionally, there are no narrative scenes associated with each month. Instead, the months are spread out horizontally and each section contains an allegorical representation of the month, as well as the corresponding zodiacal sign, planet, apostle, and human activities. For example, in the middle register of March, a red-haired man with two lutes represents the vernal month in allegorical form [fig. 191]. Aries the ram appears two compartments over, and the planet Mars three more sections to the right. St. James stands two compartments tall and is painted

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further over. The remaining sections are filled with the labors and activities associated with the March.\textsuperscript{642} The seasonal and celestial iconography combined with the remaining decoration of the room—virtues and vices and a large depiction of the Coronation of the Virgin—implies a synopsis of the total knowledge of medieval man.\textsuperscript{643}

Switching from wall frescoes to ceilings, the earliest known is an encyclopedic cycle from the small Camera di Griselda in the Castello di Roccabianca, Parma (1458-1464) [fig. 192].\textsuperscript{644} The upper walls of the room contain scenes from Bocaccio’s \textit{Decameron} painted in celebration of the Count of Berceto Pier Maria Rossi’s mistress Bianca Pelligrini. Although some scholars have suggested that the ceiling signifies the horoscope of its patron, Lippincott has noted the presence of multiple representations of each planetary god amongst the constellations—twenty-one in total—and thus a horoscope is impossible.\textsuperscript{645}

The ceiling is painted in a pale green wash with crisscrossing golden ribs dividing the plaster into twenty-four octagonal sections [fig. 193]. Each compartment contains five or six astrological figures painted in grisaille. The constellations are labeled and arranged with the northern stars in the center followed by the southern stars and the zodiac and planets that appear on the outer edges of the ceiling.\textsuperscript{646} Accounting for many of the unusual figural representations and labels, Lippincott has demonstrated that the iconography comes not from the poetry of Manilius or Aratus, but from the stellar descriptions found in Ptolemy’s

\textsuperscript{642} For the identification of these figures see Antoniazze Rossi, 50.
\textsuperscript{643} Antoniazze Rossi, 46.
\textsuperscript{644} For the Griselda ceiling see Francesco Luigi Campari, \textit{Un castello del Parmigiano attraverso i secoli: Pallavicini, Rossi, e Rangoni} (Parma: Battei, 1910), 75-76; Aislinn Haughey, “The Frescoes of the Camera di Griselda” (MA thesis, University of Alberta, 1997), 23-26; Lippincott 1985, 42-70; and C. Ragghianti, “Studi sulla pittura lombarda del Quattrocento,” \textit{Critica d’arte} 8 (1949): 31-46, 288-300. The frescoes were removed from the room in 1898 and are now displayed in the Castello Sforzesco in Milan. The artist is unknown.
\textsuperscript{645} Lippincott 1985, 44, 62-64. For the possibility of a horoscope see Haughey, 23; and Ingrid Lohaus, \textit{Galleria Rucellai: der Freskenzyklus von Jacopo Zucchi im Palazzo Rucpoli in Rom} (Baden: Deutscher Wissenschafts, 2008), 78.
\textsuperscript{646} Lippincott 1985, 44.
In addition to the celestial iconography, the ceiling of the Camera di Griselda also features various *imprese* and heraldic devices of Count Rossi and his mistress. Such emblems personalize the ceiling without adding a horoscopic meaning. Additionally, and perhaps more significantly, the addition of personal emblems evokes Rossi’s desire to show the heavens under his control, similar to the lands over which he rules in life.

Between 1498-1500 the Arte del Cambio commissioned Perugino to fresco the walls and ceiling of the Sala delle Udienze—commonly known as the Collegio di Cambio—in the Palazzo dei Priori, Perugia [fig. 194]. The walls of the audience hall contain scenes of the Virtues as well as three Christian narratives: the Transfiguration, the Adoration of the Magi, and God the Father with Angels and Sibyls. With a complex arrangement of *grotteschi*, the ceiling is divided into seven compartments with an equal number of painted roundels filled with astrological iconography [fig. 195]. As exemplified by Apollo and Leo in the center, the planetary gods ride triumphal carriages with the corresponding zodiacal sign(s) represented in the wheels [fig. 196]. The Christian iconography of the walls paired with the ceiling’s celestial imagery creates a programmatic theme of both Christian and pagan wisdom, not unlike that found in the Palazzo Ragione.

Agostino Chigi, the papal banker for Pope Julius II, was the first to commission an encyclopedic ceiling in Rome. In 1513 Chigi commissioned Raphael to design the cupola mosaics in his private funerary chapel in Santa Maria del Popolo [fig. 197]. Raphael’s designs date to c. 1513; construction on the cupola dates to 1516. For the Chigi Chapel mosaics see Kathleen Weil-Garris Brandt, “Cosmological Patterns in Raphael’s Chigi Chapel in Santa Maria del Popolo,” in *Raffaello a Roma: il convegno del 1983* (Rome: Bibliotheca Hertziana, 1986), 127-157; Brandt, “Sidera Domus:
gilded ribs and surrounding God the Father in the center of the dome, the seven planetary gods, as well as an allegory of the fixed stars, occupy a series of eight panels. An angel accompanies each planet, and the corresponding zodiacal signs appear upon a half circle in the background. Together with his angel, Mars, for example, raises his sword in triumph and gazes up towards God [fig. 198]. The signs of Aries and Scorpio are depicted behind him. The other decoration of the chapel includes the seasons, scenes from Genesis, and various funerary monuments, the latter of which postdate Raphael’s design. As Jean Seznec notes, the planets under God, as well as the accompanying angels, specifically refer to the notion that although the planets and stars may rule over man, they themselves are subject to the control of God. Considered as a whole, this iconography represents the theme of life and death, resurrection, and the beginning and end of time, all of which are appropriate themes for a funerary chapel.

Located within the private apartments of the Palazzo del Te in Mantua, the ceiling of the Sala dei Venti (1527-1528) is perhaps the most comprehensive encyclopedic cycle of the sixteenth century [figs. 199, 200]. Giulio Romano’s fresco for Duke Federico II Gonzaga is divided into a pattern of rectangles and hexagons and includes depictions of the signs of the zodiac, various extra-zodiacal constellations, the months, and ten Olympian gods: Venus, Apollo, Mercury, Jupiter, Ceres, Juno, Mars, Neptune, Diana, and Minerva. Completing the decoration is a frieze of roundels on the upper walls of the room in which

650 Seznec, 80.
651 Brandt 1986, 128; Cox-Rearick, 163; and Shearman, 142.
mythological narratives relating to the constellations are displayed. As with the Sala dei Mesi, the pairing of the Olympian gods with the Zodiac comes from Manilius.

The ceiling of the small Stanza dello Zodiaco in the Palazzo Sardagna in Trent was rediscovered only in 1944, and thus little is known about the commission [fig. 201]. Based on style, Lionello Puppi and Pietro Zampetti argue for an attribution to Marcello Fogolino in the years after 1533, but the patron remains unidentified. Divided into twelve rectangular sections, the ceiling contains the signs of the zodiac atop white clouds painted against a blue background. The remaining decoration of the room includes imaginary landscapes and roundels of unidentified male portraits.

Also in the north of Italy is Domenico Brusasorci’s 1557-1558 ceiling in the audience hall of the Palazzo Chiericati, Vicenza, painted for Valerio Chiericati [fig. 202]. Although the main narrative of the ceiling is a depiction of the Fall of Phaethon, the inclusion of the constellations warrants its inclusion within the encyclopedic category. During his ride Phaethon is frightened by the appearance of Scorpio in the sky and therefore the scorpion is often included in depictions of this Ovidian tale. For example, Sodoma’s oil painting The Fall of Phaethon of 1505-1507 [fig. 77] and Prospero Fontana’s c. 1556-1560 ceiling fresco of the same subject in the Sala degli Dei in the Palazzo Vitelli a Sant’Egidio in Città di Castello [fig. 203] demonstrate the inclusion of the scorpion in various painted media. Excluding the ceilings at Caprarola and in the Sala Bologna, the entire zodiac, however, is only

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653 Pietro Zampetti, “Affreschi inediti di Marcello Fogolino,” Arte Veneta 1 (1947): 217. For the ceiling see Lionello Puppi, Marcello Fogolino pittore e incisore (Trent: Collana Artisti Trentini, 1966), 44; and Zampetti, 217-222. Various rooms dating to the sixteenth century, including the Stanza dello Zodiaco, were incorporated into the eighteenth-century Palazzo Sardagna during that palace’s construction. See Zampetti, 217.

654 Puppi, 44; and Zampetti, 217, 218.


656 Of Marongiu’s extensive catalog of Renaissance representations of Phaethon, six include a depiction of Scorpio. See Marcella Marongiu, Currus Auriga Paterni Fetonte nel Rinascimento: Modelli Antichi e Fortuna del Mito nell’Arte dei Secoli XI/II-XVIII (Lugano: Agorà Publishing, 2008), figs. 10, 13, 20, 49, 79, and 89.
represented in three other Phaethon frescoes: Chiericati, the Palazzo Antonini, and the Palazzo Giustiniani, of which the latter two will be discussed below. The irregularity of this iconography suggests that these three examples carry additional astrological meaning. Here at Chiericati, the portrayal of the zodiac and all of the constellations implies Valerio Chiericati’s knowledge of the heavens and his interest in the celestial sciences.

Not far from Vicenza and the Palazzo Chiericati is Daniele Barbaro’s famous Palladian country villa at Maser. Commissioned in 1559-1561, Paolo Veronese frescoed the interior of the villa, including the Sala dell’Olimpo. The ceiling of this salon contains a depiction of Divine Love surrounded by the planetary gods [fig. 204]. The zodiacal signs are painted in gray silhouette against the clouds, and are arranged in correspondence with their ruling planets. Understood together with the wall frescoes of various landscapes, portraits of the Barbaro family, and the four seasons, Inge Jackson Reist has suggested that the iconography of the room embodies the Humanist theme of Divine Love ruling over the heavens and all the forces of nature.

Within the complex decorative program of the Galleria Rucellai in the Roman Palazzo Ruspoli, Jacopo Zucchi painted various elements of astrological iconography for Orazio Rucellai in 1586-1590 [fig. 205]. In the center of the ceiling Jupiter, Mars, Apollo, Venus, and Mercury ride triumphal carriages and surrounded by roundels of fictive bronze.

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657 For examples of Phaethon ceiling frescoes see Marongiu, figs. 13, 23, 29, 31, 37, 42, 61, 78, 79, 80, 81, 89, 91, 96, 100, 102, 114, 115.
659 Reist, 614. Pesenti 41, notes the inclusion of an armillary sphere held by the cupid next to Mercury. This iconography is not usually linked with the planet, and as such Pesenti suggests the possibility of a horoscopic element. The arrangement of the ceiling, however, precludes such an interpretation.
with the signs of the zodiac. On the lower edges of the vault the extra zodiacal constellations are painted within a frieze of alternating roundels and lunettes located between pendentives of various other Olympian gods. Ingrid Lohaus argues that the celestial iconography is based on the poetry of Hyginus and that the astrological symbolism represents the passing of time. Moreover, the presence of various scenes of ancient Roman history and the busts of the Roman emperors painted on the walls of the audience hall evoke a theme similar to that in the Palazzo d’Arco.

The next encyclopedic example is Caravaggio’s only ceiling painting, created in c. 1599 for Cardinal Francesco Maria del Monte in the Villa Boncompagni-Ludovisi, Rome [fig. 206]. Entitled Jupiter, Neptune, and Pluto after the three gods depicted, the ceiling is painted in oil directly on plaster. In the center of the composition is a transparent globe with a zodiacal band representing the outermost celestial sphere. In the center of this globe is a smaller brown sphere signifying the Earth. The four signs of the zodiac depicted include Pisces, Aries, Taurus, and Gemini [fig. 207]. Bellori suggested the theme of alchemical knowledge, and indeed the iconography fits such a description. As both Maurizio Calvesi and Nancy Wallach explain, the three gods represent the elements of air, water, and fire. Additionally, as Wallach notes, an alchemical transformation had to be performed under

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661 Lohaus, 72-73.
663 Puglisi, 112, identifies the fourth zodiacal sign painted in the sphere as Cancer, and thus argues that its position near the Sun references del Monte’s birth. This fourth sign is difficult to discern in images of the ceiling that postdate the restoration in the 1990s. Photographs before this restoration, however, clearly show the twins. Moreover, it is Gemini, not Cancer, that follows Taurus, and therefore there does not seem to be a horoscopic connection to the cardinal.
665 Calvesi, 25; and Wallach, 107.
specific astrological conditions to be successful. The inclusion of the zodiacal band on the outer sphere therefore further alludes to the transformative sciences. Indeed, the central placement of Aries and Taurus—the signs traditionally associated with the creation of the Philosopher’s stone—represent the most important of alchemical practices.666

Francesco Albani’s ceiling in the Loggia of the Palazzo Verospi frescoed for Cardinal Ferrante Verospi between c. 1611-1612, shows Apollo within a gilded rectangular frame in the center [fig. 208].667 The Sun god flies through a zodiacal ring with each of the twelve signs clearly depicted. On the left of the scene Flora and Ceres recline, and on the right are Bacchus and Vulcan. Depicted in two roundels outside the central narrative are putti representing day and night. Framing the central panel are the planetary gods who move about a cloud-filled sky. Similar to the decoration of the Villa Barbaro, the inclusion of both the zodiac and the planetary gods demonstrates an emphasis on celestial iconography and implies a celebration of passing time.

A last example of encyclopedic ceiling painted in Italy between 1300 and 1700 is found in Udine. In 1697 Count Antonio Antonini commissioned Giulio Quaglio to paint the ceiling of the Salone Centrale in the Palazzo Antonini [fig. 209].668 Similar to the fresco in the Palazzo Chiericati, the central narrative is a depiction of the Fall of Phaethon framed in white stucco. To the right is Juno and to the left is Vulcan. Two other gods, Neptune and Ceres,669 are painted above and below Phaethon. The remaining compartments encircle the main narrative and contain allegories of the twelve months with the corresponding

666 Wallach, 107.
669 The bottom compartment shows a goddess in a chariot pulled by lions. Lions traditionally control Jupiter’s chariot but the representation of a female precludes his identity.
zodiac signs painted in shields [fig. 210]. The four gods selected represent the four elements: Juno for air, Vulcan for fire, Neptune for water, and Ceres for earth. The elements, combined with the months, the zodiacal signs, and images of the seasons painted on the wall, create a decorative program representing the passage of time.

Encyclopedic Knowledge, Authority, Heaven, and Time

As noted with each example, encyclopedic mural cycles embody a variety of meanings with four themes appearing repeatedly. The concept of encyclopedic knowledge is present in all the aforementioned cycles, but is emphasized in various ways in the Palazzo Ragione, the Collegio di Cambio, the Sala dei Mesi, the Palazzo d’Arco, the Villa Barbaro, the Galleria Rucellai, and the Villa Boncompagni-Ludovisi. In these examples the celestial iconography of the walls or ceiling is combined with depictions of landscapes, the months, the seasons, or the four elements, as well as various scenes from ancient Rome, classical mythology, and Catholic history. Such a wide range of iconography encompasses the encyclopedic knowledge of late medieval and Renaissance man. The celestial sciences and the depictions of time and place via landscape and the seasons represent the comprehension of nature, while the historical, mythological, and Catholic narratives indicate the three branches of wisdom.

The frescoes in the Sala dei Mesi, the Palazzo d’Arco, the Palazzo Sardagna, and the Camera di Griselda demonstrate a claim of authority or ownership over the universe. On the walls of the Sala dei Mesi and the Palazzo d’Arco, the display of landscape, courtly activities, and labors of the months combine with the zodiac to suggest the possession of both the terrestrial and celestial realms. Similar in concept to the patron’s territorial claim to the lands painted in each fictive arch, the astrological iconography represents a figurative
claim to the heavens above. Although the patron of the Palazzo Sardagna fresco is unknown, the combination of the zodiac on the ceiling with various landscapes and portraits painted on the walls likewise indicates the symbolic control of both heaven and Earth. Finally, the insertion of personal emblems amongst the constellations painted on the ceiling of the Camera di Griselda indicates a comparable statement about Count Pier Maria Rossi.

Given that encyclopedic cycles originated within the tradition of medieval calendars and Books of Hours, it follows that many murals represent the passage of time. This theme is especially evident in the Palazzo Ragione, the Sala dei Mesi, the Collegio di Cambio, the Chigi Chapel, the Palazzo d’Arco, the Galleria Rucellai, the Verospi Loggia, and the Palazzo Antonini. In addition to the zodiac, which by definition represents the annual path of the Sun and thus a measurement of time, each of these examples includes illustrations of the planetary gods, the months, or the seasons. The months are represented through allegory, as seen in the Palazzo Ragione; through the labors associated with each, exemplified by the Sala dei Mesi, the Palazzo d’Arco, and the Palazzo Ragione; or, given their association, the planetary gods, as demonstrated in the Collegio di Cambio, the Chigi Chapel, the Palazzo Ragione, the Galleria Rucellai, the Verospi Loggia, and the Palazzo Antonini. Additionally, the seasons are represented in the Palazzo Ragione, the Verospi Loggia, and the Palazzo Antonini.

The final theme found in displays of encyclopedic cycles is also the simplest. Given its location above the viewer, a ceiling is the logical place for a representation of the celestial realm. Additionally, the portrayal of the constellations helps contextualize the narrative of Phaethon, as seen in the Palazzo Chiericati and the Palazzo Antonini. The style of heavenly representation in the Renaissance changed from an illustration of the celestial spheres or a simple starry wash to detailed astrological iconography of the constellations or planets. As
exemplified by each ceiling analyzed here, this imagery is spread out over entire vaults and presents the viewer with an erudite reading of the sky. Deriving from rediscovered Greco-Roman poetry, this iconography presents Renaissance man with a deeper understanding of the celestial realm and the luminaries contained therein.

Of the fourteen encyclopedic examples presented, six were commissioned in the northern courts of Mantua, Ferrara, Parma, Padua, and Trent. The remaining eight cycles are divided equally between Rome and elsewhere (the Veneto, Perugia, and Udine). Those cycles painted in the northern courts appear before the middle of the sixteenth century, understandably due to the eventual decline in power of those duchies.\footnote{Viviana Lucco says that encyclopedic ceilings disappear in the fifteenth century, but this is emphatically untrue. Although I argue that these murals are more popular in the northern courts, the ceiling in the Palazzo Verospi demonstrates the use of such imagery in the seventeenth century. For Lucco’s statement see “Gli affreschi astrologici di Montagnana,” in \textit{Le corti rinascimentali}, ed. Luciana Cassanelli (Rome: Sinnos Editrice, 2004), 77.} Given that a court’s authoritative claim was established largely through controlled territory, the themes of terrestrial and celestial authority are an appropriate demonstration of legitimacy. Encyclopedic knowledge likewise demonstrates courtly activities and the cultural cachet of the patron. Such iconography reveals the \textit{magnificenza} of the courts, aggrandizes the patron, and creates reverence in the viewer.

The composition of encyclopedic ceilings parallels the evolution of vault decoration in general.\footnote{The following discussion focuses on the style of the encyclopedic ceilings, and thus the wall frescoes of the Palazzo Ragione, the Sala dei Mesi, and the Palazzo d’Arco are omitted.} The earliest examples—that is, the Camera di Griselda, the Collegio di Cambio, the Chigi Chapel, the Sala dei Venti, the Palazzo Sardagna, and the Palazzo Chiericati—are each arranged with clear and distinct sections composed of roundels or octagonal panels. As such, the planetary gods and constellations are isolated and organized into clearly defined patterns, making the legibility of the iconography exceptionally clear. Such compartmentalization matches that found in other fifteenth- and early sixteenth-century...
painted vaults, as exemplified by Mantegna in the Mantuan Camera degli Sposi (1465-1474), Alessandro Pampurino in the Cremonese Casa Maffi (c. 1500), and Correggio in the Parmesan Camera di San Paolo (1519) [figs. 211, 212, 213]. With the exception of the painted oculi in the center of Mantegna and Pampurino’s frescoes, these three ceilings are composed of a series of roundels and dividing groins with iconography that is clearly defined and separated.

With the popularization of quadratura in the second half of the sixteenth century, the compartmentalization of ceiling frescoes fell in favor to the preference for illusionistic vaults with sweeping narratives covering the entire painted space. Three of the latest encyclopedic cycles—those in the Villa Barbaro, the Galleria Rucellai, and the Verospi Loggia—follow this pattern. Rather than depicting the astrological iconography within individual sections, the artists of these ceilings painted the planets and constellations as part of an overall narrative. Additionally, the planetary gods in each example interact with each other, thus signaling a fully integrated iconographical program. Finally, although the planetary gods of the Villa Barbaro and the Verospi Loggia are placed against a blue sky, none of the encyclopedic ceilings are painted as a thoroughly illusionistic vault completely open to the heavens. Given the themes of encyclopedic knowledge, courtly authority, and the passage of time, such an illusion is unnecessary as it was the symbolic implications of astrological iconography that was essential and not the portrayal of celestial bodies within an illusionistic sky.
Horoscopic Ceilings

The popularity of judicial astrology was revived in the Renaissance and horoscopes were regularly cast for noble patrons. Following the model of Manilius, the Renaissance natal chart was depicted as a square and divided into twelve houses, each of which rules a different aspect of one’s life. The location of the seven planets and zodiacal constellations within the chart is determined by the date, time, and location of one’s birth, and it is the relationships between the houses and these celestial bodies that are meaningful to and interpreted by the astrologer. Unlike the horoscopes of today, where one’s sign is determined by the location of the Sun along the ecliptic, in the Renaissance, as in antiquity, it was the ascendant sign, or the zodiacal constellation that was rising on the eastern horizon at birth that was considered the most revealing about one’s life. Because the entire zodiac appears to rotate around the Earth every twenty-four hours, the ascendant is only located on the eastern horizon for a period of two hours each day and is therefore more closely associated with the actual moment of one’s birth.

A horoscope was thought to determine one’s personality, and, if interpreted correctly, could forecast the consequences of his or her life. As a woodcut from Jacobus Rueff’s medical textbook De conceptu et generatione of 1587 demonstrates, this belief was so prevalent and integral to daily life that an astrologer was often present at the birth of upper-class children so as to accurately plot the horoscope with the utmost precision and accuracy [fig. 214]. If a horoscope was not constructed at the time of birth, or if a child was born during the daytime, a natal chart could be calculated with the use of an armillary sphere and a set of

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672 See Appendix 4 for diagrams and definitions of terminology. For the construction of a horoscope see Manilius III.203-509.
673 Compare this method with the one in use today of an individual’s Sun-sign, where, for example, anyone born between April 21 and May 21 is a Taurus, due to the Sun’s month-long position in that particular zodiacal sign. For the history and construction of horoscopes see Beck 2007, esp. 20-118.
astronomical records such as the Alfonsine Tables that listed the positions of the planets and fixed stars.\textsuperscript{674} As a result of the importance given to personal horoscopes, a patron might choose to change his if it contained any negative features. For example, Willy Hartner notes the discrepancy between Pope Julius III’s horoscope of October 15, 1488 and his recorded birth on September 10, 1487.\textsuperscript{675} Although this might seem odd to a modern historian, the manipulation of one’s horoscope was common practice in the Renaissance.\textsuperscript{676}

In view of the ubiquity of natal charts and the corresponding promotion of great birth, the depiction of one’s horoscope became a popular theme in Renaissance art. Similar to the ceilings described from antiquity, Humanist patrons commissioned artists to portray the stars as they appeared at the time of key moments in their life. As the following discussion will show, each ceiling contains an allusion to the patron’s horoscope as a way of celebrating his divinely sanctioned success, albeit in vastly different pictorial forms.

\textit{The Farnesina}

In 1510 Baldassare Peruzzi was charged with the task of giving visual form to the horoscope of his Sienese patron Agostino Chigi, papal banker and confidant of Julius II, in the newly built Villa Chigi (now Farnesina) on the banks of the Tiber River in Rome. In the Sala di Galatea Peruzzi painted in allegorical form the planets, zodiac, and various extrazodiacal constellations as they appeared in the sky over Siena at Chigi’s birth on November 29, 1466 at 9:30pm [fig. 215].\textsuperscript{677} Based on the precise organization of the fresco Fritz Saxl

\textsuperscript{674} See Grafton 1999, 27-29.
\textsuperscript{676} Hartner, 1; and Quinlan-McGrath 2001, 717, 720.
was able to identify the ceiling as horoscopic, and with the help of astronomer Arthur Beer he estimated the date and time of Chigi’s birth as on or around December 1, 1466.\textsuperscript{678} Given its accuracy, compositional clarity, and comprehensiveness, the Farnesina fresco provides an excellent paradigm with which to compare other horoscopic imagery.

Beginning in the bottom left and arranged clockwise are the signs of the zodiac represented in the painted spandrels. The two large scenes in the center—Perseus with Fame on the left and Ursa Major (known as the Wain in the Renaissance) on the right—are essential clues in deciphering the organization of the fresco; because Ursa Major is a prominent northern constellation and Perseus lights up the southern sky, these two panels orient the viewer to a correct axial reading of the ceiling. The key to interpreting Peruzzi’s fresco as a record of time is the location of the planets painted within the zodiac. Venus inhabits Capricorn, the Sun is within Sagittarius, Mercury and Mars within Libra and Scorpio, the Moon with Virgo, Jupiter with Taurus, and Saturn within Pisces. Because there are only a few days in history that match this exact celestial positioning, Saxl and Beer were able to arrive at their conclusions.

Regarding those born under Chigi’s ascendant sign of Virgo, Manilius writes that they are destined for great intelligence and achievement:

\par The temperaments of those whose span of life she pronounces at their birth Erigone \textsuperscript{[Virgo]} will direct to study, and she will train their minds in the learned arts…On them she will confer a tongue which charms, the mastery of words, and that mental

\textsuperscript{678} Saxl 1934, 65.
vision which can discern all things, however concealed they be by the mysterious workings of nature.\textsuperscript{679}

In agreement with this reading is a poem written by Aegidius Gallus in 1511 in which he describes a selection of the greatest personalities of his day. Chigi’s accomplishments, according to the poet, were due to his birth because “…Astrae [Virgo] tucks [him] away on her bright star to ascend the difficult mountains of virtue.”\textsuperscript{680}

When the ceiling of the Sala di Galatea is viewed from the original entrance, that is, from the garden, the celebration and emphasis of Chigi’s ascendant sign becomes clear. From this viewpoint north is seen to the right, south to the left, and the east, with Virgo, is given pride of place directly overhead and receives Fame’s song from the trumpet she plays in the center. The fresco is thus not only arranged so that it would be oriented for the approaching visitor, but also, through its clever composition and precise organization, it emphasizes the most significant elements of Chigi’s horoscope. Any learned visitor entering the dining room for one of the many lavish banquets held there would have immediately recognized the implication of this ceiling: that the papal banker’s success was predetermined by the heavens that smiled upon him with a great birth.\textsuperscript{681}

Other Examples

Situated in the corner of the ceiling above The School of Athens in Pope Julius II’s Stanza della Segnatura is Raphael’s small allegory of Astronomia painted between 1508-1511 [fig. 216].\textsuperscript{682} Flanked on either side by two putti and floating in front of a luminous gold

\textsuperscript{679} Manilius, IV.189-197.
\textsuperscript{680} Aegidius Gallus, \textit{De viridario Augustini Chigi, Patritii Sene.} (Rome, 1511), V.2.26-27.
\textsuperscript{681} For the Sala di Galatea as a dining room see Lippincott 1990A, 207.
\textsuperscript{682} The precise identification of this allegory is debated. She is variously identified as Urania, the muse of astronomy; Astronomia, one of the liberal arts; or Astrologia. See Christiane L. Joost-Gaugier, \textit{Raphael’s Stanza della Segnatura: Meaning and Invention} (Cambridge: Cambridge University Press, 2002); and Nancy Rash-Fabbri, “A Note on the Stanza della Segnatura,” \textit{Gazette des Beaux-Arts} 94 (1979): 100. As Kristen Lippincott suggests,
background in reference to the divine realm, Raphael depicts *Astronomia* as a beautiful young maiden clothed in billowing green drapery. With left hand raised, she gazes down adoringly at the universe held in her right hand. Beginning with Draco at the top of the globe and moving in a clockwise direction are the constellations Andromeda, Pisces, Cetus, Pisces Meridionalis, Capricorn, Aquarius, Delphinus, Lyra, and Pegasus. Because there are no planets present, a specific date or time cannot be calculated from this illustration of the stars. The emphasis given to Pegasus located just above the Earth in the center is significant, however, when considered within the context of Julius' papacy. In the autumn months between September and November the winged horse lights up the night sky at the latitude of Rome, and thus its prominence here provides a reference to the pope’s election on October 31, 1503. Raphael’s small corner fresco is the earliest horoscopic representation portrayed on a ceiling, and unlike Peruzzi’s Farnesina, it also demonstrates how the placement of just a few important constellations can describe an event of personal significance.

Between 1519 and 1523 Lorenzo Leonbruno painted the ceiling of the small Camera dello Zodiaco in the Castello di San Giorgio of the Mantuan Palazzo Ducale for Duke Federico II Gonzaga [fig. 218]. In the center of the vault is Hercules painted with the


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683 Rash-Fabbri, 98, was the first to identify the constellations. I am working with the slightly modified version from Lippincott 1993, 77.

684 For Pegasus’ relationship to Julius’ election see Cox-Rearick, 180; Edgerton 1991, 206; Joost-Gaugier, 52; Lippincott 1993, 79; and Rash-Fabbri, 100. For the interpretation of the other constellations as representative of Julius’ early successes in the League of Cambrai and as an iconographical link to Augustus Caesar see Urban 2010.

facial features of the duke, and radiating out from him are the zodiacal constellations. A system of painted ribs divides the ceiling into twelve compartments, and each intersects one of the zodiacal signs thereby mimicking the format of a horoscopic chart. On the outer edges of the ceiling are the planetary gods arranged in the following order: Saturn with Taurus, Apollo and Mercury with Gemini, Mars and Venus with Cancer, Diana with Capricorn, and Jupiter between Pisces and Aries. This specific arrangement of the planets amongst the zodiacal signs parallels the natal chart of Federico, and given the commission’s date of 1519—the same year he became Marchese of Mantua—suggests that the fresco was intended to glorify his destined rule.

Leo X was the second pope to commission a horoscopic ceiling in the Palazzo Vaticano. Between 1520 and 1521 Perino del Vaga and Giovanni da Udine decorated the ceiling of the Sala dei Pontefici, an audience room located in the Borgia apartments [figs. 218, 219]. Flanking a painted central oculus are the representations of the Sun and Saturn on the left and Leo and Venus to the right. Surrounding this inner section are the remaining zodiacal signs, the planets, and five extra-zodiacal constellations. According to Claudia Rousseau, the constellations Cygnus and Aquila, together with Lyra—represented by the lyre held by one of the victories in the central oculus—form the great summer triangle and thus refer to the sky overhead at the time of Leo’s birth in a manner not unlike Raphael’s earlier allusion to the autumnal sky in the Stanza della Segnatura. Although modeled on Peruzzi’s example in the Farnesina, Leo’s horoscope has not been arranged accurately; instead the
elements of his natal chart have been rearranged in order to highlight specific aspects. For example, the central placement of the Sun and the constellation Leo glorify the namesake of the pope, as it was on account of the inherent astrological link to Rome that the Medici pope chose his name. Additionally, the leonine constellation shines brightly overhead during March, the month of Leo X's ascension to the papacy, and indeed this reference to such a divine election can be found within other artistic works commissioned by the pope, including select borders of the Sistine Tapestries.

As the son of Lorenzo the Magnificent, who invited many astrologers into his court, the future Pope Leo would have been exposed to the lessons of astrology at an early age. Indeed, it was during his tenure within the Medici household that the famed Renaissance astrologer Marsilio Ficino first foretold the papacy of the young Giovanni. The decoration of the Sala dei Pontefici suggests that Leo took this prophecy to heart, and similarly to Agostino Chigi, commissioned a ceiling that displayed in pictorial form the notion that his ascension to power was astrologically predestined. Moreover, at the time of this commission the Medici pope was attempting to overcome criticisms due to his controversial involvement with the election of the Holy Roman Emperor, as well as his poor handling of the growing Protestant Reformation. Such a large demonstration of celestial preordination could, as Rousseau argues, act as the Renaissance equivalent of good publicity.

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689 Urban, 2010. The lion has long been considered the protector of Rome based on the city’s mythological founding date in antiquity, on which see Luca Gaurico, *Tractatus astrologicus in quo agitur de praeteritis multorum hominum accidentibus per proprias eorum genituras ad unguem examinati* (Venice: Apud Curtium Trojanum Navò, 1552), I.5r; and Rousseau 142. For the significance of Sagittarius and Gemini within the pope’s horoscope, and the depiction of these constellations in the Sala dei Pontefici, see Cox-Rearick, 195; and Rousseau, 163.

690 As pope, Leo employed various astrologers at court and he also founded a chair of astrology at La Sapienza. See William Roscoe and Luigi Bossi, *Vita e Pontificato di Leone X*, vol. V (Milan, 1817), 279-283; and Rousseau, 128.

691 See Bini, 30; and Cox-Rearick, 30. The Medici also employed Francesco Priuli, the same celestial advisor to Agostino Chigi.

692 Rousseau, 153.
At the same time of the Sala dei Pontefici’s decoration, Cardinal Alessandro Cesarini commissioned the ceiling of the Sala dello Zodiaco in his Roman Palazzo Cesarini [fig. 220].\(^{693}\) In the center of the ceiling is the Cesarini coat of arms surrounded by Apollo on a chariot and the constellation Leo. Placed between various *grotteschi*, the ceiling also includes the planets Saturn and Venus, the signs of the zodiac, and a selection of extra-zodiacal constellations arranged to signify the horoscope of the cardinal. The similar coloring and composition of Cesarini’s ceiling with that of Leo X’s in the Vatican should be seen as a tribute to the pope who made him a cardinal in 1517.\(^{694}\) Cesarini’s ceiling, therefore, not only celebrates the cardinal’s horoscope, but also honors his close friend and patron.

Alberto del Sebastiano Cestarelli commissioned Dosso Dossi to paint the ceiling of a small room on the *piano nobile* of the Casa Cestarelli in Ferrara in c. 1530 [fig. 221].\(^{695}\) The wooden ceiling contains six diamond-shaped compartments with tempera paintings of the zodiac, as well as a central octagon showing Jupiter riding Aquila the eagle. Amalia Mezzetti published an article about the ceiling and described its iconography. Based on the organization of the constellations, she argued that the ceiling represents the cycle of the seasons.\(^{696}\) Indeed, the pairings of the zodiac—Aries with Taurus, Gemini with Cancer, Virgo with Leo, Libra with Scorpio, Sagittarius with Capricorn, and Aquarius with Pisces—shows a progression from spring to winter and therefore demonstrates the passage of time popular amongst astrological court murals. The inclusion of Jupiter, however, does not belong in such an otherwise strictly seasonal program, and thus I suggest that the planet’s inclusion makes reference to the horoscope of Cestarelli. The planet does not interact with

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\(^{694}\) Lucatoni, 212-213.


\(^{696}\) Mezzetti, 70.
the painted zodiac directly, but the constellation Aquila is prominent in the summer sky and therefore may allude to an important event in Cestarelli’s life in a similar fashion as Raphael’s fresco in the Stanza della Segnatura.

Another wooden ceiling with panel paintings is found in the Sala degli Elementi in the Palazzo Vecchio, Florence. Commissioned by Duke Cosimo I de’ Medici, Vasari painted the walls and ceiling of the room between 1555-1557 [fig. 222]. As Rousseau explains, the alchemical and astrological iconography—seen in the depiction of the four elements, the planets, and the hours of the day—represents the creation of the cosmos. In the center of the ceiling is an oil painting of the *Castration of Saturn* in which Saturn reclines in front of an armillary sphere, a large crown, and various allegories [fig. 223]. The Golden Age of Saturn represents that of Cosimo I and the scene includes iconographical indications of the horoscope of the duke. As Rousseau explains, Saturn was on the horizon in the sign of Capricorn at the time of Cosimo’s birth, and this natal reference is represented through the proximity of Saturn and the central zodiacal sign of Capricorn located on the armillary sphere directly above the planet’s head. Additionally, the crown in the scene stands as a representation of the constellation Corona Borealis, which occupies the place of Mid-Heaven in Cosimo’s natal chart.

Horoscopic references to Cosimo I are also found in Vasari’s central ceiling panel of the *Apotheosis of Cosimo* in the Sala Grande painted between 1563 and 1565 in the same palazzo [fig. 224]. Here again Rousseau convincingly argues that this aggrandizing imagery

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697 For the Elementi see Rousseau, 320-356.
698 Rousseau, 322-323.
699 For the Golden Age of Saturn and Cosimo I see Rousseau 128-132. For the following iconography see Rousseau, 330-335.
700 Given its link to the birth of Caesar Augustus, Cosimo I especially celebrated the sign of Capricorn. See Rousseau, 2-20.
701 For the *Apotheosis*, see Rousseau, 356-396.
contains horoscopic elements in reference to the Duke’s glorious birth. The shields that surround Cosimo I in the scene stand in for the various Tuscan families over which the duke ruled; their arrangement, however, mimics the composition of his natal chart. For example, the location of the shield with a goat on the left of the composition represents the sign of Capricorn rising on the ascendant during Cosimo’s birth. Similarly, the three shields with a large single star, as well as that of an eagle (which can be interpreted as Aquila, and thus the planet Jupiter), are each placed in strategic positions. Additionally, the wreath held by Flora above the duke’s head in the center is a reference to Corona Borealis. This ceiling panel, similar to that seen in the Castration of Saturn in the Sala degli Elementi, portrays the horoscope of the Medici Duke through carefully arranged symbolism rather than the depiction of an entire natal chart.

Another mural that contains horoscopic references to the patron but cannot be read as an accurate natal chart is Giovanni de’ Vecchi’s 1573-1574 ceiling fresco in the Palazzo Farnese at Caprarola [fig. 56]. The inclusion of horoscopic elements intended to glorify the Farnese family precludes Cardinal Alessandro’s ceiling from cartographical accuracy. For example, the inclusion of the planet Jupiter in the upper left corner signals, as Loren Partridge explains, the cardinal’s “spiritual role as papal legate carrying the universal power of the pope into battle to suppress heresy.” Additionally, the manipulation of the constellation Argo in the lower left corner mimics the symbol of the Farnese imprese celebrating the family’s victory over Julius III in the battle for the territory of Parma between

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702 For the following iconographical analysis see Rousseau, 386-391.
704 Partridge, 422.
Finally, the inclusion of several fleurs-de-lis, the goat Capella, and the Sun located within the narrative of the Fall of Phaethon, refers to the power and patronage of the Farnese family.

The next example continues the Gonzaga’s tradition of using astrology to glorify the family. In 1579 Lorenzo Costa painted for Duke Guglielmo a celestial ceiling in the Stanza dello Zodiaco in the private apartments of the Mantuan Palazzo Ducale [fig. 225, 226].

The corners of this vault, as well as the stars of each constellation, are highlighted in gold, and the zodiac and ecliptic run through the middle of the composition. In the center Diana rides her chariot next to the constellation Virgo. Given the inclusion of the Moon, the only planet represented, as well as its visual prominence in the center of the ceiling, the relationship between this celestial body and the adjacent zodiacal virgin must be seen as a reference to the horoscope of the Gonzaga family. Whether this astrological symbolism refers to the birth or election of Guglielmo, or some other event entirely, remains unclear.

In 1609 Marchese Vincenzo Giustiniani commissioned the first astrological ceiling of the seventeenth century for the gallery of his Palazzo Giustiniani in Bassano di Sutri, just outside Rome [figs. 227, 228]. Similar to the ceilings in the Palazzo Chiericati and the Palazzo Antonini, the main narrative of Francesco Albani’s fresco is the Fall of Phaethon, but there is an emphasis on the zodiac, here displayed as a large band crossing the center of the ceiling. Sagittarius begins the strip on the lower right edge, shown just above the painted balustrade. The gods in this same corner cover Capricorn, but the remaining signs follow in zodiacal order. At the opposite end of the ceiling Leo is located next to Phaethon’s chariot,

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705 Partridge 418-422.
707 For Giustiniani’s ceiling see Marongiu, 195-196; and Catherine Puglisi, *Francesco Albani* (New Haven and London: Yale University Press, 1999), 9, cat. 36.
Virgo is partially obscured by the horses, the scales of Libra float on the clouds in the upper left corner, and finally, Cancer is painted between the openings of the balustrade. As Catherine Puglisi suggests, the zodiacal band has been shifted so that it does not highlight Scorpio but instead the astrological aspects relevant to Giustiniani. As discussed with the Palazzo Chiericati, the myth of Phaethon describes how Scorpio scared the protagonist during his chariot flight in the sky and thus the scorpion is often shown within the narrative. In Giustiniani’s gallery, however, the constellations Virgo and Leo are highlighted instead and are depicted next to the Sun and Phaethon’s chariot. In fact only the upper portion of Scorpio is visible on the ceiling’s edge. As Puglisi argues, the visual importance given to Virgo and Leo is indicative of Giustiniani’s horoscope and suggests that the ceiling therefore celebrates the birth of the Marchese.

In 1629-1633 Cardinal Antonio Barberini commissioned Andrea Sacchi to paint the ceiling of Anna Colonna’s salletta in the papal family palace in Rome [fig. 229]. The fresco, entitled Divine Wisdom after the central allegory, celebrates the family’s rise within the Church. Eleven allegories representing different aspects of religion surround the central figure, and each woman holds an object that is not only a representational attribute, but also a constellation that holds significance for the Barberini family. Beginning on the left is the allegory of Nobility with the crown Corona Borealis; Justice with the scales of Libra; Eternity with Serpens biting its tail; Fortitude with the club of Hercules; Suavity with Lyra the lyre; Divinity with Triangulum representing the Trinity; Beneficence with Virgo’s sprig of wheat; Divina Sapienza in the Palazzo Barberini,” The Art Bulletin 58 (1976): 97-108; Scott, 38-94; and Urban 2010.
Holiness with the altar Ara; Purity with Cygnus the swan; Perspicacity with Aquila the eagle; and Beauty with the golden hair of Coma Berenices. Additional figures include the allegory of love riding atop Leo in the upper left corner, and Fear with the rabbit Lepus to the right. George Lechner argues that the Sun’s central placement in the composition—seen on the breast of Divine Wisdom and near Leo—indicates a reference to the summer months and thus alludes to the electional horoscope of Urban VIII on August 6, 1629. Moreover, John Beldon Scott suggests that the arrangement of the remaining constellations represents the natal charts of both Urban VIII and Taddeo Barberini.

The Medici family commissioned their third horoscopic ceiling in the Sala di Apollo in the Florentine Palazzo Pitti [fig. 230]. In 1642, Duke Ferdinand II commissioned Pietro da Cortona to fresco a series of rooms in the palazzo known as the planetary rooms after the main protagonist in each composition who assists Cosimo I to his destiny. As a planetary god Apollo represents the Sun, and indeed the Sun radiates brightly in the center of the ceiling above the various gods depicted in the Sala di Apollo. To the right is Hercules who holds the universe in his hands, portrayed here as a blue globe with golden stars and the signs of the zodiac illustrated on a central band. The constellation of Capricorn is given prominence in the center, and as Malcolm Campbell argues, the relationship between Capricorn and the Sun in this fresco suggests a reference to the horoscope of Caesar.

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712 For these figures and attributes see Lechner, 97-101; and Scott, 80-86. The last constellation, Coma Berenices, is not listed by Ptolemy, and thus indicates the progression of astronomy in the seventeenth century with Tycho Brahe.
713 Lechner, 101.
714 Scott, 84-86.
Augustus, whose own sign was the goat, and to whom Cosimo I often linked himself.\footnote{Campbell, 149.}

Additionally, Campbell suggests that the twin putti in the lower section of the composition represent Gemini, the rising sign of Cosimo I.\footnote{Campbell, 149.}

The astrological ceiling in the Roman Palazzo Altieri is the final fresco to be discussed within the horoscopic category. Commissioned in 1676, Domenico Maria Canuti painted the *Apotheosis of Romulus* on the vault of the Sala di Romolo for Cardinal Paluzzo Altieri [fig. 231].\footnote{For the Sala di Romolo see Eduard A. Safarik, “L’Apoteosi di Romolo,” in *Roma Palazzo Altieri: le stanz e al piano nobile dei cardinali Giovanni Battista e Paluzzo Altieri*, ed. Daniela di Castro and Gabriele Reina (Milan: Franco Maria Ricci, 1999), 25-29.}

On the left of the ceiling and with the help of the god Mars, Romulus ascends to heaven, represented in the middle of the composition as a cluster of clouds and various Olympian gods. Above Romulus and Mars is a depiction of the zodiacal band with the constellations Gemini, Cancer, Leo, and Virgo depicted. As Eduard Safarik argues, the emphasis of these zodiacal signs refers to the horoscope of various members of the Altieri family.\footnote{For the following iconographical analysis see Safarik, 26-28.}

For example, the location of Cancer just above Romulus indicates the birth of Clement X on July 12, 1590 as well as his death on July 22, 1676. Additionally, there are references to the natal charts of Gaspare Altieri and Laura Caterina’s children, as their son Emilio was born under Cancer in July 1670, Lorenzo under Gemini in June 1671, and Giovambattista under Leo in August 1673. Finally, Safarik claims that Mars points to Gemini with the tip of his spear and thus makes reference to the birth of Cardinal Paluzzo Altieri on June 8. Mars’ spear, however, points to two putti who float above the zodiacal band and not to the Gemini twins, who in fact appear further down to the left of the band.

\footnote{For the following iconographical analysis see Safarik, 26-28.}

Safarik bases his analyses on the Sun-signs of the family members in question.
This iconographical correction questions the validity of an astrological connection to Cardinal Paluzzo’s horoscope.\textsuperscript{720}

\textit{A Celebration of One’s Glorious Birth}

Two types of horoscopic ceilings become apparent from the above discussion. The first are those that present a complete or partial horoscope, as exemplified by the imagery in the Farnesina, the Camera dello Zodiaco, the Sala dei Pontefici, and the Palazzo Cesarini. The remaining examples instead use only a selection of horoscopic elements to refer to a particular event, usually the birth or official election of the patron. Ten of the fourteen examples discussed above belong to this latter group, revealing that patrons favored alluding to their horoscope through the inclusion of specific astrological iconography. The fact that someone’s death could be predicted from their natal chart might explain the greater number of ceilings of this second type. Urban VIII, for example, was famously fearful of fatal predictions, and thus he issued the papal bull \textit{Inscrutabilis} in 1631 that reaffirmed Sixtus V’s 1586 ban of astrological prediction.\textsuperscript{721} Additionally, as the above examples illustrate, referential astrological imagery was often incorporated into larger narratives, and thus the patron could have a mural that contained a horoscopic message within a scene of a different subject.

Despite these two different styles, all horoscopic ceilings were intended to flatter the patron and aggrandize his or her glorious birth. This type of decoration could be used to celebrate the greatness of both the character and deeds of the patron, and in some cases, such as with Leo X, it might be used in an effort to excuse criticism by demonstrating one’s fate and actions as celestially predetermined and thus, to some extent, out of the patron’s

\textsuperscript{720} Safarik, 26-28.
\textsuperscript{721} For Urban’s bull see Ernst, 265-270; and Rousseau, 66-67.
The fact that a duke, pope, cardinal, or other nobleman commissioned each of the above examples testifies to the popularity of celestial imagery and attendant astrological beliefs within the highest echelons of Renaissance society.

The location of horoscopic murals—eight in Rome, three in the northern courts and three in Florence—presents another key in understanding the significance of this iconography. Unlike encyclopedic frescoes popular in the northern courts that show a patron’s authority gained through territorial claims or encyclopedic knowledge, horoscopic ceilings instead portray one’s power through celestial predestination, and within a Catholic context, through God. This explains the dominance of horoscopic iconography in Rome, the home of the popes and a number of cardinals who proclaimed that they were born to rule. Indeed, with the exception of the encyclopedic Palazzo Verospi, each of the astrological murals commissioned by a pope or a cardinal is horoscopic in nature. It is especially noteworthy that the ceilings found within the Palazzo Vaticano and papal family palaces—including Raphael’s *Astronomia*, the Sala dei Pontefici, the Palazzo Barberini, and the Palazzo Altieri—are all horoscopic. The popularity of such iconography within the papacy reinforces the message that God’s representative on Earth was celestially ordained and destined for power.

Significantly there are no horoscopic murals from the fourteenth or fifteenth centuries. Instead, the sixteenth-century papacy played a critical role in the development of this imagery. The celestial references to Julius II’s election contained within Raphael’s allegory of *Astronomia* introduced the use of horoscopic imagery as a means of aggrandizing a patron. The fact that the first horoscopic example was a papal commission in essence

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722 Rousseau, 37-40, argues Cosimo I’s similar use of horoscopic iconography.
723 A similar statement may be made about the Medici, who advertised through art that their power was gained through glorious birth.
legitimized the use of horoscopic iconography for other ecclesiastical and noble patrons to follow.

During the Council of Trent, Church reformers grouped celestial prediction with the occult and magic, effectively outlawing all types of practice except for mundane astrology. Additionally, Sixtus V issued the papal bull *Coeli et terrae* in 1586, condemning judicial astrology and reinforcing the notion that only God foresees the future. Yet despite these two injunctions, there was no decline in Post-Tridentine horoscopic imagery. Moreover, those within the Church, including popes and cardinals, continued to commission horoscopic ceilings. What does change, however, is the location of such murals. For example, there were no more commissions within the Palazzo Vaticano. Instead papal families, such as the Barberini and the Altieri, reserved horoscopic imagery for the ceilings of their private palaces. Moreover, the frescoes commissioned after 1586—including the ceilings of the Palazzo Giustiniani, the Palazzo Barberini, the Palazzo Pitti, and the Palazzo Altieri—no longer contained full natal charts but instead included horoscopic references within a larger narrative. This shift in iconography camouflaged the horoscopic elements while at the same time allowed the learned viewer to understand the celestial references. In other words, although horoscopic imagery prevailed after Trent, it was incorporated into larger narrative themes and thus made more visually subtle.

Similar to the encyclopedic examples, the style of horoscopic frescoes follows that of the general evolution of ceiling painting. The later examples—those post-dating Caprarola—are painted illusionistically and appear as a large and open celestial panorama. In

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724 For astrology and the Council of Trent see Ernst, 249-273; Mandel, 17-39; and Rousseau, 49.
725 For Sixtus’ bull see Ernst, *passim* but esp. 249; Cherubini Laerzio, *Magnum Bullarium Romanum*, vol. II (Lyons, 1692), 515-517; and Mandel 17.
726 Lohaus, 84, says otherwise, that there are no horoscopic ceilings commissioned after the Council of Trent. This is demonstrably false.
addition to a general progression of style found in ceiling painting, the nature and purpose of horoscopic imagery provides additional insight into the ubiquitous portrayal of an illusionistic sky. If the purpose of this iconography is to provide proof of a patron’s glorious birth and predetermined destiny, it follows that such proof should be illustrated as accurately as possible. In other words, during the age of natural philosophy and empiricism, the depiction of the constellations and planets in an illusionistically painted sky is made more visually credible than a series of compartments that present an allegorical approach to the same message. Unlike various astrological motifs painted within various octagons, an open sky provides a snapshot of the actual universe during the moment of one’s birth and effectively confirms the legitimacy of the painted horoscope to the viewer.

**Commemorative Ceilings**

Although both record a specific date and time, commemorative frescoes differ from horoscopic ceilings in that they celebrate something other than a birth or election. Moreover, there is no natal chart or zodiacal influence to be interpreted. Instead, these examples use the stars to astronomically capture the sky at a given moment so as to document a contemporary event.

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Old Sacristy

Cosimo de' Medici il Vecchio commissioned the earliest example of this type, a small fresco painted on the cupola over the altar in the Old Sacristy of San Lorenzo in Florence, attributed to Giuliano d’Arrigo, called Pesello [figs. 232, 233]. A section of the western sky is depicted with the constellations painted in blue monochrome with white highlights and golden stars. Various meridian lines are outlined, including the ecliptic in the lower center of the composition. The Sun appears between the zodiacal constellations Cancer and Gemini, and to the right is the Moon within the sign of Taurus. Based on this astronomical alignment, Warburg estimated a date of July 9, 1422, which corresponds with the consecration of the altar. Scholars have since become divided on the date indicated on the cupola, as later calculations have suggested July 6, 1439, the date of the closing of the Council of Florence. Although the precise event and therefore the reference remain unclear, both possible dates are relevant to the Medici family, and thus the commemorative function of the fresco over the cupola is clear.

Other Examples

The other two commemorative cycles are equally elusive. Mimicking the Old Sacristy is the fresco in the cupola over the altar of the Pazzi Chapel at Santa Croce, Florence [fig. 234].\textsuperscript{731} The composition, as well as the astronomical record of time, is exactly the same as that in the Medici Chapel, and therefore the same debates regarding the dating displayed in the fresco are also relevant. Given the chapel’s completion in 1459, however, the Pazzi fresco post-dates that of the Old Sacristy. The constellations in the Pazzi example are painted in shades of gray and differ stylistically from their predecessors, thus indicating the hand of a different artist. Half of the ceiling exists today in poor condition, and thus it is difficult to fully interpret all of the iconography. Dieter Blume argues, however, that since the entire Pazzi Chapel is largely modeled on the Old Sacristy, it follows that the fresco is repeated as well.\textsuperscript{732} Such a repetition of iconography, especially that commemorating an important Medici event, demonstrates the importance of Cosimo il Vecchio amongst his followers.\textsuperscript{733}

The third commemorative example is found in the cupola of the Cappella della Madonna del Rosario in the Duomo of Montagnana outside Padua [fig. 235].\textsuperscript{734} This fresco, rediscovered in 1959, is even less understood than those preceding it, and both the artist and patron remain unknown. Like the two Florentine examples, a segment of the western sky is depicted with the constellations Argo, Draco, Ursa Major and Minor, and the zodiacal constellations Leo and Virgo. Pegasus, who appears on the left border, and Orion, on the right edge, are cartographically misplaced.\textsuperscript{735} Located along the painted ecliptic on the right

\textsuperscript{731} For the Pazzi chapel see Blume 2006, 159-160; and Lapi 1988. The artist is unknown.
\textsuperscript{732} Blume 2006, 159-160.
\textsuperscript{733} Blume 2006, 160.
\textsuperscript{734} For Montagnana, see Lucco, 60-65.
\textsuperscript{735} For these constellations see Lucco, 60-65, although there is no theory offered for the odd composition.
of the composition is the depiction of a partial solar eclipse. Working with astronomer Roberto Nesci, Viviana Lucco argues for the commemoration of an event on either August 29, 1448 or July 29, 1478, based on the occasion of an eclipse on both of those dates. As with the previous examples, the event commemorated by the Montagnana ceiling is unknown.

An Astronomical Record of Time

The small number of commemorative ceilings and the fact that they were all painted in the same century suggests that this type of decoration was a brief trend rather than a major tradition. Moreover, the dearth of similar iconography demonstrates the lack of desire among patrons for a strict astronomical record of time. In addition, the unknown elements of each commission make any analysis difficult. Although each fresco appears in the cupola of a private family chapel, the events commemorated are unknown. It nevertheless remains difficult to deny that the events recalled by the astronomical records had lasting significance for the patrons commemorating them.

Cartographic Ceilings

My last category of astrological imagery is the accurate cartographical display of the heavens. Similar to commemorative cycles, this type is an exception to the more common encyclopedic and horoscopic tradition. In fact there is only one fresco that meets all of the categorical requirements: the ceiling of the Sala Bologna. Unlike most scholars I do not label the ceiling of the Palazzo Farnese at Caprarola a map, and therefore I do not include it within the category of cartographical accuracy. As discussed above and in Chapter 2, although the Caprarola ceiling is similar to the later Sala Bologna, the inclusion of horoscopic elements and the manipulation of various constellations prevent it from being cartographically accurate.
of the stars within the composition mimics that of the actual sky and therefore acts as an accurate map of the heavens. Instead of representing encyclopedic knowledge, a personal horoscope, or a record of a specific event, the ceiling of the Sala Bologna performs several different and unique functions. Unlike all others surveyed, this ceiling serves uniquely as a demonstration of Gregory XIII’s control over the celestial realm, a visual affirmation of Cardinal Paleotti’s artistic theories, a celebration of celestial cartography, and a presentation of contemporary astronomy as a conquest of Catholic faith and religion.

Part III: The Ceiling of the Sala Bologna

The decorative program of the Sala Bologna exhibits Gregory XIII’s ideological control over both the terrestrial and celestial realms. Although the portrayal of a patron’s figurative command of the heavens is a common feature of encyclopedic murals, the method by which this same claim is presented in the Sala Bologna varies greatly from the established tradition. Gregory’s ceiling is unique, as it is the first time control of the divine realm has been displayed through the means of cartography instead of the representation of God’s heavenly kingdom. In addition to its papal commission, the location of the Sala Bologna ceiling—within the residence of the pope—inherently links its iconography to the Catholic Church. Gregory, in his embodiment as the Vicar of Christ, represents the papacy’s, and therefore the entire Catholic Church’s, jurisdiction over the heavenly realm, as the Bolognese maps on the walls similarly represent his terrestrial rule. In this sense, the map of the heavens in the Vatican methodically acts as a monumental statement of the Counter Reformatory ideals evident at the time of Gregory XIII.

The Sala Bologna ceiling is also distinctive for its connection to the opinions of Cardinal Paleotti to the usefulness of scientific imagery as outlined in his Discorso Intorno alle
Imagini Sacre e Profane. Such images, argues the Cardinal, represent God’s creation and therefore act as an appropriate visual intermediary for spiritual contemplation. Among maps and the various representations of nature, Paleotti specifically mentions celestial imagery. The ceiling of the Sala Bologna therefore confirms the Cardinal’s beliefs in regards to the appropriateness of astronomical decoration and provides a channel for the contemplation of the divine. Moreover, for a scientific image to be beneficial Paleotti notes the necessity of accuracy, and the cartographic precision of Gregory’s ceiling is one of its predominant features. Cartography by definition seeks to illustrate fact, and Paleotti’s arguments elucidate the impetus behind the strictly Ptolemaic representation of the heavens on the ceiling of the Sala Bologna.

Paleotti’s treatise also provides insight into the absence of personal or horoscopic references in Gregory’s ceiling. In his discussion of celestial imagery he warns against portraying a horoscope, arguing that such a representation may “arouse suspicion” in a viewer. Unlike the previous examples of celestial representations painted within the Vatican—those of Julius II and Leo X—there is no reference to the Boncompagni pope’s horoscope in the Sala Bologna ceiling. Like Raphael’s fresco, the absence of the planets prevents such a reading. Moreover, because all of the constellations are depicted, there cannot be a general reference to a time of the year as seen in the Julian example.

Although the examples of the Palazzo Giustiniani, the Palazzo Barberini, the Palazzo Pitti, and the Palazzo Altieri prove that horoscopic imagery persisted after the Council of Trent, a reformist pope did not commission these frescoes for a ceiling in the Palazzo Vaticano. At the time the Sala Bologna was painted, horoscopic decoration remained

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738 Paleotti, 356-357.
common practice. The changing atmosphere of late Cinquecento Rome, however, necessitated that Gregory reference his natal chart more subtly, as an ancillary representation in the painting of Marcus Manilius. Unlike the humanists Julius II and Leo X, the Boncompagni pope focused his attention on reform. The Council of Trent’s condemnation of judicial astrology meant that a conspicuous display of one’s horoscope within the Palazzo Vaticano was no longer appropriate. This development becomes evident when comparing the Sala Bologna with the similar and roughly contemporary fresco at Caprarola. Although commissioned by a cardinal, the location of the latter fresco—in a palace outside Rome—indicates that these Tridentine decrees did not affect art commissioned within private residences. The inclusion of a blank horoscopic tablet with the depiction of Bononia and the presence of Gregory’s natal chart in the hands of Manilius in the Sala Bologna both demonstrate the continued belief in astrological practice in the late sixteenth century, but this iconography is subordinate to the sweeping presentation of scientific accuracy portrayed on the ceiling.

**A Celebration of Celestial Cartography**

As with the terrestrial maps painted on the walls in the Sala Bologna, the cartographic accuracy of the ceiling is particularly advanced, and therefore I argue that the ceiling functions as a celebration of celestial mapmaking. As the following discussion will show, the Sala Bologna ceiling has no cartographic equal in large-scale representations of the heavens. Considering the lengths the Boncompagni pope went to in order to achieve precision in his various frescoes—including new surveys for maps in the Galleria delle Carte Geografiche—I do not believe any other ceiling, including that at Caprarola, should be classified in this same category. On a superficial level the Farnese fresco reads as a map of
the heavens, but the various adjustments, inaccuracies, and horoscopic additions greatly alter its cartographic accuracy and affect its message.

**Celestial Cartography**

Images of the constellations date back to antiquity, but, with the exception of the Farnese Atlas, there are no surviving globes or celestial maps from this time. In the Middle Ages the constellations decorated numerous manuscript folios but were portrayed independently and not in accurate maps. Moreover, these illuminations served a decorative purpose and therefore the stars within the constellations were often omitted. Given the fact that medieval astronomy was largely based on the recopying of translated texts and star charts, the celestial maps preserved from this period exhibit a lack of cartographic precision. Additionally problematic was the inconsistency in the number of constellations portrayed. As Anna Herlihy notes, the number depended upon which text was being copied, and as such varied between forty-eight (based on Ptolemy), forty-four (based on Aratus), and forty-two (based on Hyginus). It was not until the Renaissance that the Ptolemaic forty-eight became the standard.

The cartographic reproduction of the heavens was therefore the occupation of the globe-maker who could, in three dimensions, more accurately render the celestial realm.

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739 Deborah Jean Warner, *The Sky Explored: Celestial Cartography 1500-1800* (New York: Alan R. Liss, Inc., 1979), xii. As Warner notes, although the Farnese Atlas was rediscovered in the early sixteenth century, its cartographic significance was not realized until c. 1700.


741 Herlihy, 102.

What radically changed the production of cartography—both terrestrial and celestial—was the development of the printing press in the mid-fifteenth century, which allowed, for the first time, the wide scale manufacturing of flat, and thus portable, maps. This invention led to an explosion of map-making in the early sixteenth century with printing centers in Florence, Rome, and Venice. These new celestial maps fundamentally aided new-world exploration, as accurate maps of the heavens were crucial for nautical navigation.

The rediscovery of Ptolemy’s second-century Geography in the early fifteenth century also played a critical role in the revival of both celestial and terrestrial cartography. As Francesca Fiorani explains, Ptolemy’s Geography had as much impact on Renaissance map-making as Pliny did on natural philosophy and Vitruvius on architecture. The number of copies of the Geography produced in the Renaissance testifies to the text’s popularity and usefulness. In 1477 five hundred copies were printed in Bologna alone, and the first

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743 For the importance of the printing press on celestial cartography see Leo Bagrow, History of Cartography (Chicago: Precedent Publishing, 1985), 89; and Warner 1979, x.
746 Fiorani 2005, 78
747 For a listing of the incunabula editions see Bagrow, 91-93. For a listing of the printed editions see Federzoni, 103-110.
748 See Bagrow 89; and Crone, 37-38.
Roman edition appeared in 1478 with engravings by Konrad Sweynheym.\textsuperscript{749} Contained within the Geography's pages are the keys and fundamental instructions for the construction of accurate two-dimensional stellar maps based on the celestial coordinates of the ecliptic, or the yearly path of the Sun. This system created a standard method for angular measure and the location of the equinoxes.\textsuperscript{750} Additionally, it standardized the division of the ecliptic into twelve equal sections of thirty degrees, each of which contained a corresponding zodiacal sign.\textsuperscript{751}

Based on the information gained from Ptolemy's Geography, the most important celestial map of the time was that by Albrecht Dürer [figs. 66, 67]. Made in Nuremberg in 1515, Dürer's print was not merely a star catalog or decorative image of the heavens but was instead the first accurately rendered map of the sky in two dimensions.\textsuperscript{752} Its creation was a collaboration between three men: Dürer, who drew the figures and cut the blocks; the humanist and mathematician Johann Stabius who drew the coordinates; and Conrad Heinfogel, another mathematician, who positioned the stars.

The Nuremberg print takes the form of a planisphere, or a circular map centered on one of the equatorial or ecliptic poles [fig. 88]. Each of the constellations is labeled and carved on two separate blocks corresponding to the two hemispheres. As Deborah Warner notes, each star is clearly depicted and accurately rendered so that its position is easily identifiable.\textsuperscript{753} Representing a history of the celestial sciences are the figures of Aratus,
Manilius, Ptolemy, and the tenth-century Persian astronomer Abd al-Rahman al-Sufi, depicted in the four corners of the northern hemisphere print. Also depicted in this hemisphere is the zodiac carved on the edges of the planisphere. Like all of the constellations, the zodiacal constellations are depicted in figurative form and labeled, but they are also accompanied by their astrological glyphs.

A surge in the methodical production of two-dimensional celestial map-making resulted from Dürer’s paradigm, as well as the invention of stylistic differences in the depiction of the constellations. Although increasingly diverse in their embellishment as styles changed, the constellations, in order to read correctly, had to occupy the same position and relative location to one another and it was in this respect that the Nuremburg print set the standard. As Seznec notes, Dürer carved his celestial figures with the physical characteristics of a Renaissance style, but this figural embellishment is not at the expense of cartographic accuracy.  

The Sala Bologna

In addition to its sophisticated cartography, several iconographic details more closely align the Sala Bologna ceiling with the guidelines of Ptolemy’s Geography and Dürer’s map than with the similar fresco at Caprarola, to which it is often compared. For example, the stars in the Vatican, both in the constellations and in the spaces between, are painted more brilliantly than their Farnese counterparts, thus resulting in greater prominence. With the exception of a few constellations, such as Ursa Major, the stars at Caprarola fade into the background and are scarcely visible between the mythological figures of the constellations that are here given greater emphasis. This difference suggests that the stars in the Sala

754 Seznec, 187.
755 I have made this comparison by personally viewing each fresco in natural daylight.
Bologna are equally, if not more, important than the allegorical form of the constellations. In contrast, the emphasis given to the constellation figures at Caprarola indicates that the mythology of the constellations is of greater significance.

Both ceilings contain a depiction of the principle meridian lines, including the ecliptic, the celestial equator, the Tropics of Cancer and Capricorn, and the North and South Poles. The additional insertion of the Arctic and Antarctic Circles in the Sala Bologna, however, reveals a greater priority of precision. Moreover, the Vatican fresco mimics the zodiac in Dürer’s print by including both the allegorical figures of the signs as well as their astrological glyphs. Perhaps most significant is the lack of personal emblems in the Sala Bologna compared to those found throughout the Caprarola fresco. The inclusion of various horoscopic elements and the modification of the constellations to incorporate them—particularly the depiction of the planet Jupiter and the adjustment of Ursa Major’s location and size—thwarts the accuracy of Alessandro Farnese’s presentation. The lack of personal iconography in Gregory’s ceiling instead instills an emphasis on Ptolemaic cartography. Although the Sala Bologna includes a depiction of The Fall of Phaethon, this allegory does not affect the location of the constellations and therefore the ceiling’s cartographic integrity remains intact.

One final evaluation of the ceiling of the Sala Bologna and that at Caprarola reveals the priority given to accurate mapmaking in the former. In contrast to the painted clouds on the outer edges of Alessandro Farnese’s fresco that suggest a realistic vision of the sky as if seen through an opening in the room’s architecture, the constellations in the Vatican appear as if painted on a flat canopy. This compositional technique emphasizes the apparent two-dimensional and map-like quality of the scene, especially when viewed in comparison with the fictive loggia painted just below. Such deliberate flatness was a compositional decision,
as the quadratura frescoed on the upper walls demonstrates that illusionistic perspective was successfully employed elsewhere in the room. The four putti holding the canopy in each corner confirm that the stars in the Sala Bologna are plotted on a map and are not actually filling the sky above.

A Display of Contemporary Astronomy

When examined within the rapidly changing context of late sixteenth-century astronomy, the remaining iconography and thematic meaning of the Sala Bologna’s vault are revealed. In 1543 Copernicus published his groundbreaking astronomical treatise De Revolutionibus in which he argued for a heliocentric universal system. Although always controversial within the Papal States, the text did not immediately raise significant concern within the Catholic Church; in fact it was dedicated to Paul III in recognition of the Farnese pope’s fondness for astronomy. As J.L. Heilbron explains, “Questions of planetary geometry occupied too few people to worry a church fighting soul-threatening schisms.” Indeed, at the time of the Sala Bologna’s decoration Copernicus’ treatise was not yet

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757 For Copernicanism see Applebaum, 158-162.

758 Heilbron, 14.
restricted, and it exemplifies better than any other contemporary treatise the Renaissance development of new astronomical theories.

Equally significant in chronology was the appearance in 1572 of a supernova, a dying star in the last stages of life that creates an explosion bright enough to remain visible for several weeks, even during daylight [fig. 236].

This celestial event, together with another supernova in 1604, threw the medieval system of the universe into chaos as it questioned the very nature of the heavens. The temporary appearance of these two supernovae contradicted several key factors of the Aristotelian heavens, including the notion of an eternal and immutable universe, as well as the solidity of the Divine Spheres. According to Aristotelian theory, everything sub-lunar consisted of the four elements and was susceptible to change. Everything above the moon, however, was thought to be incorruptible, unchanging, and made of the fifth element Ether. The appearance of a transitory celestial phenomenon like a supernova is categorically impossible in such a scheme. Many aspects of the traditional universal system were therefore disproven and Renaissance astronomers were forced to reconsider the composition of the universe.

The depiction of the Milky Way painted diagonally across the Sala Bologna ceiling provides further insight into the current state of astronomical practice. While the accuracy and placement of the constellations testifies to the advancement in celestial calculation and cartography, the absolute absence of stars in the frescoed Milky Way demonstrates that astronomers in the late Cinquecento had not yet perfected the methods necessary for celestial

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759 For the nova of 1572 see Francesco Giuntini, *Discorso sopra la cometa apparsa nel mese di novembre, 1572... con dichiarazione di tutte le comete apparse da l'anno 1301 fino al 1572* (Venice: Domenico Fattri, 1573). For novae in general see Applebaum, 466-467.

760 According to Aristotelian theory, the celestial spheres above the Moon were immutable and unchanging. The temporary appearance of a supernova therefore contradicted this universal system.


762 For Ether see Applebaum 215-216; and Grant 1996, 191.
observation. As a result, many aspects of the universe that we accept today as common knowledge were not yet known. Although one of the many traditional explanations given for its cloudy appearance, that the Milky Way is composed of millions of stars was not proven until Galileo’s telescopic observations in 1610. Unlike the other fields of natural philosophy, such as Mercati’s geology or Aldrovandi’s biology, there was not a practicing astronomer famous for his pre-telescopic observations at the time of the Sala Bologna’s decoration. Instead, modern astronomical observation began at the end of the sixteenth and the beginning of the seventeenth century with Tycho Brahe and Johannes Kepler in northern Europe.

The celestial decoration of the Sala Bologna therefore represents the Church’s collective and official attitudes towards astronomy in that it does not question the nature of the heavens but instead portrays them as His creation. The ceiling demonstrates that the practice of astronomy offered support to the teachings of the Church and did not threaten them. Additionally, Gregory’s fresco represents a remarkable moment in the evolution of the celestial sciences as it visually demonstrates a shift from astrological interpretation to astronomical calculation. The fact that such a ceiling was painted within the Palazzo Vaticano in 1575 further exemplifies the importance of this moment in the development of astronomical theory and its relationship with Catholicism. There is a tendency for modern historians to focus on the relationship between astronomy and Catholicism in the post-Galilean era and argue that the two were always at odds. As I have argued throughout this dissertation, however, such a notion is overly simple and emphatically false. Moreover, as Heilbron notes, the papacy was one of the leading sources of financial support for the

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astronomical sciences during the Middle Ages and into the Age of Enlightenment. Indeed, at the time of the Sala Bologna’s decoration, Copernicanism had yet to be condemned and Galileo’s observations would not be made for another thirty-five years. It is telling then that this fresco is the only one of its kind, as it sits on the cusp of the tumultuous scientific revolution of the next century when the spiritual implications of astronomical inquiries could no longer be ignored by the papacy.

This analysis of Gregory’s fresco with other astrological imagery demonstrates that the Sala Bologna ceiling has no comparison in the tradition of celestial decoration. Not merely an illustration of the stars, Gregory’s fresco represents the contemporary advancements in celestial cartography and acts as a demonstration of God’s creation that could be used as a visual aid for spiritual meditation as outlined by Cardinal Paleotti. No other celestial fresco can claim such complex implications. Moreover, the location in the Palazzo Vaticano and the late sixteenth-century date of the ceiling demonstrate an exceptional moment within the history of astronomy. Finally, the frieze of celestial gods and ancient astrologers and astronomers painted within the quadratura solidifies the vault’s emphasis on the history and practice of the celestial sciences. This latter point is especially evident when compared to the portrait busts painted below the ceiling in the Sala del Mappamondo at Caprarola. With the inclusion of such personalities as Vespucci, Magellan, Marco Polo, and Columbus, the thematic emphasis at Caprarola is not astrology or astronomy but rather terrestrial cartography and exploration.

764 Heilbron, 3.
Part IV: Manipulating the Heavens: The Use of Celestial Iconography in the Renaissance

The thirty-two astrological murals discussed here demonstrate the popularity of this imagery in Italy between 1300 and 1700. The fact that the highest members of society—including dukes, popes, and cardinals—commissioned scenes of encyclopedic knowledge or personal horoscopes additionally establishes the popularity of celestial iconography. These themes are entirely connected to the advent of Humanism with the rediscovery of ancient astrological texts as well as the imitation of ancient Roman decoration. The contemporary developments within the field of natural philosophy and empiricism also play a critical role, not only for the theme of these murals but also for the style in which they are presented. Encyclopedic knowledge of the terrestrial and celestial realms, for example, increases when nature is observed directly. Moreover, the transition from paintings of the divine spheres to ceilings that open up to the sky and contain images of the constellations reflects the growing interest in the celestial sciences at the time.

The number of encyclopedic and horoscopic murals commissioned is equal: fourteen and fourteen. The distribution of each theme throughout the centuries, however, reveals how the popularity of encyclopedic themes declined in favor of horoscopic imagery. For example, the only mural from the fourteenth century is encyclopedic. In the fifteenth century there are three encyclopedic and three commemorative examples. The sixteenth century, which saw the greatest number of murals, has eight encyclopedic compared to ten horoscopic cycles. Finally, in the seventeenth century there are only two encyclopedic examples in contrast to the four horoscopic ceilings. This is a result of the increasing popularity of astrological prediction and the use of natal charts. The following table lists each mural chronologically by century:
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<th>Century</th>
<th>Mural</th>
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<td>Ragione</td>
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<td>Caprarola</td>
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<td>Sala Bologna</td>
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The location of astrological murals is another key to understanding their significance.

Unlike medieval illustrations, Renaissance celestial decoration was no longer kept within the confines of a manuscript. Instead, this imagery was painted in large format on walls and ceilings by some of the leading artists of the day. Of the thirty-two examples, twenty-two were painted in public or semi-public rooms including galleries, reception and audience rooms, dining rooms, grand salons, and open chapels. Each of these rooms was, among
other purposes, a room in which the patron received distinguished guests. Additionally, close intimates of the patron would have been allowed to view the frescoes that were painted in the private apartments or family chapels, of which the ten remaining examples belong. The placement of astrological imagery therefore demonstrates that this type of pictorial aggrandizement was intended to reach a wide audience and was used by the patron as a form of visual self-promotion.

As this chapter has shown, the themes present in astrological murals vary greatly and include a demonstration of encyclopedic knowledge, a portrayal of a patron’s figurative control over the universe, a depiction of the passage of time, a representation of the heavens, a display of a personal horoscope, the commemoration of an event, and the celebration of contemporary cartography and astronomy. Despite these differences, each mural serves the same purpose: to aggrandize the patron and promote a personal agenda.

Although allegorical imagery can and often is used to evoke the glory of a patron—and indeed many of the examples discussed combine celestial elements with allegories—astrological iconography goes beyond this strategy by providing empirical proof of one’s greatness. In an age when natural philosophers were venturing outside the studio to study nature first hand, astrological imagery provided the artistic answer for a patron who wished to visually prove his own knowledge and importance. For example, the depiction of Urania, the muse of astronomy, is one approach for showing a patron’s acquaintance with the

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765 Although they were not a place to entertain guests, the four examples painted within family chapels were also public, in the sense that anyone entering the respective church would be able to view the decoration.

celestial sciences. A depiction of the zodiac or planets, however, more clearly illustrates that the patron understands the mechanics and properties of the universe. The figure of Father Time represents the passage of time, but the display of the zodiac, the months, the seasons, and the planets portrays the objects with which we calculate that passage, and therefore demonstrates a patron’s comprehension of horology. A similar argument can be made for the iconography of the Sala Bologna. Rather than using the allegories of *Astronomia* and *Geografia* to demonstrate his understanding of these two sciences, Gregory XIII had his artists paint an accurate representation of the heavens to give visual evidence of his undisputed knowledge. Additionally, the portrayal of the heavens through the depiction of celestial objects located within the sky confirmed a patron’s grasp of ancient poetry in a way that an illustration of the divine spheres cannot. Finally, an allegory such as Divine Providence may symbolize a patron’s right to rule, but the display of a personal horoscope shows this same idea as an indisputable fact, and is therefore more powerful and absolutely convincing.

The decline of celestial imagery in the seventeenth century demonstrates that the conflicts between astrological belief and the Catholic Church could no longer be ignored. For four centuries, however, astrological murals decorated the rooms of both secular and religious leaders. These paintings were a popular method of demonstrating a patron’s temporal or ecclesiastical power by visualizing empirical proof, a task impossible for a figurative allegory to complete.
Appendix 1: Constellations of the Sala Bologna and Iconographic Descriptions

1. Andromeda
2. Antinous
3. Aquarius
4. Aquila
5. Ara
6. Argo
7. Aries
8. Auriga
9. Boötes
10. Cancer
11. Canis Major
12. Canis Minor
13. Capricornus
14. Cassiopeia
15. Centaurus
16. Cepheus
17. Cetus
18. Corona Australis
19. Corona Borealis
20. Corvus
21. Crater
22. Cygnus
23. Delphinus
24. Draco
25. Equuleus
26. Eridanus
27. Gemini
28. Hercules
29. Hydra
30. Leo
31. Lepus
32. Libra
33. Lupus
34. Lyra
35. Ophiuchus
36. Orion
37. Pegasus
38. Perseus
39. Pisces
40. Pisces Austrinus
41. Sagitta
42. Sagittarius
43. Scorpius
44. Serpens
45. Taurus
46. Triangulum
47. Ursa Major
48. Ursa Minor
49. Virgo

50. Fall of Phaethon

A. North Pole (+90°)
B. Arctic Circle (+66.5°)
C. Tropic of Cancer (+23.5°)
D. Celestial Equator (0°)
E. Tropic of Capricorn (-23.5°)
F. Antarctic Circle (-66.5°)
G. South Pole (-90°)
H. Ecliptic
I. Autumnal Equinoctial Colure
J. Vernal Equinoctial Colure
K. Summer Solstitial Colure
ANDROMEDA (#1)

Aratus
(197-204): “For there, too, wheels that woeful form of Andromeda, enstarred beneath her mother... So bright is her head and so clearly marked are both the shoulders, the tips of her feet and all her belt. Yet even there she is racked, with arms stretched far apart, and even in Heaven bonds are her portion. Uplifted and outspread there for all time are those hands of hers.”

Manilius
(I.354-360): “Next come Cepheus and Cassiopeia, twisting to witness the sacrifice she caused, and Andromeda abandoned hard by, who would shrink before the enormous gaping jaws of the Sea-monster [Cetus], did not Perseus even in heaven maintain his former love and come with timely aid, holding up the dread face of the Gorgon, a triumph for him but death for the beholder.”
(V. 19-26): “On yonder side [in the northern hemisphere]... [is] Cepheus sacrificing his daughter Andromeda...”
(V.538-618): “There follows the constellation of Andromeda, whose golden light appears in the rightward sky when the Fishes [Pisces] have risen to twelve degrees. Once on a time the sin of cruel parents caused her to be given up for sacrifice, when a hostile sea in all its strength burst upon every shore, the land was shipwrecked in the flood, and what had been a king’s domain was now an ocean. From those ills but one price of redemption was proposed, surrender of Andromeda to the raging main for a monster to devour her tender limbs. This was her bridal; relieving the people’s hurt by submitting to her own, she is amid her tears and adorned as victim for the beast and dons attire prepared for no such troth as this; and the corpseless funeral of the living maiden is hurried on its way. Then as soon as the procession reaches the shore of the tumultuous sea, her soft arms are stretched out on the hard rocks; they bound her feet to crags and cast chains upon her; and there to die on her virgin cross the maiden hung. Even in the hour of sacrifice she yet preserves a modest mien: her very sufferings become her, for, gently inclining her snow-white neck, she seemed in full possession of her liberty. The folds of her robes slipped from her shoulders and fell from her arms, and her streaming locks covered her body. You, princess, halcyons in circling flight lamented and with plaintive song bewailed your fate, shading you by linking their spans of wing. To look at you the ocean checked its waves and ceased to break, as was its wont, upon the cliffs, whilst the Nereids raised their countenance above the surface of the sea and, weeping for your plight, moistened the very waves. Even the breeze, refreshing with gentle breath your pinioned limbs, resounded tearfully about the cliff-tops. At length a happy day brought to those shores Perseus returning from his triumph over the monstrous Gorgon. On seeing the girl fastened to the rock, he, whom his foe had failed to petrify with her aspect, froze in his tracks and scarcely kept his grasp of the spoil: the vanquisher of Medusa was vanquished at the sight of Andromeda. Now he envies the very rocks and calls the chains happy to clasp such limbs. On learning from the maiden’s lips the cause of her punishment, he resolves to go through war against the sea to win her hand, undaunted though a second Gorgon come against him. He quickly cuts a path through the air and by his promise to save their daughter’s life awakens hope in the tearful parents; with the pledge of a bride he hastens back to the shore. Now had a heavy surge begun to rise and long lines of breakers were fleeing before the thrust of the massive monster. As it cleaves the waves,
its head emerges and disgorges sea, the waters breaking loudly about its teeth and the swirling sea afloat in its very jaws; behind rise its huge coils like rings of an enormous neck chain, and its back covers the whole sea. Ocean clamors in every quarter, and the very mountains and crags quake at the creature's onset. What terror then, unhappy maiden, was expressed on your countenance, defended though you were by such a champion! How all your breath fled into the air! How all the blood ebbed from your limbs, when from the cleft in the rocks you beheld with your own eyes your fate, the avenging monster swimming towards you and driving the waves before it, how helpless you a victim for the sea!

Hereupon with a flutter of winged sandals Perseus flies upwards and from the skies hurls himself at the foe, driving home the weapon stained with the Gorgon's blood. The beast rises to meet him, rears its head, twisting it out of the water, leaps aloft upon its support of winding coils, and towers high in the air with all its bulk. But as much as it rises hurtling up from the deep, always so much does Perseus fly higher and mock the sea-beast through the yielding air, and strike its head as it attacks. Yet not submitting to the hero the monster bites furiously at the breezes, though its teeth snap vainly and inflict no wounds; it spouts forth sea towards heaven, drenches its winged assailant with a bloodstained deluge, and sends in spray the ocean to the stars. The princess watches the duel of which she is the prize and, no longer mindful of herself, sighs with fear for her gallant champion: her feelings more than her body hang in suspense. At last, its frame riddled with stabs, through which the sea fills its body, the beast sinks, returns once more to the surface, and covers the mighty ocean with its massive corpse, still a fearful sight, and not for a maiden's eyes to look on. Victorious, Perseus bathes his body in clear water and flies from the sea to the lofty crags and releases from the chains which bind her to the rock the girl whose betrothal was sealed by his readiness to fight and who could now become a bride thanks to the bridegroom's dowry of her life.”

**Sala Bologna**
Nude maiden with green drapery covering her lower mid-section. Arms outstretched and bound by a golden chain.

**Caprarola**
Nude maiden with narrow strip of white drapery.

**Dürer**
Completely nude.
ANTINOUS (#2)

**Aratus**
Not included.

**Manilius**
Not included.

**Sala Bologna**
Nude youth with blonde hair. Gestures out with right hand and looks to the right. Shown kneeling, without a seat.

**Caprarola**
Sits on a seat, looking to the left.

**Dürer**
Not included.
AQUARIUS (#3)

Aratus
(283): “By [Pegasus’] head is stretched the right hand of Hydrochoüs [Aquarius]…”

Manilius
(I.272): “…from urn upturned the Waterman [Aquarius] pours forth the wonted stream…”
(II.259): “The youthful Waterman, who from upturned pot pours forth his stream…”

Sala Bologna
Youthful nude with lower mid-section covered in red drapery. Looks to the left and holds a bronze cup in his left hand. A golden pitcher with a mask is linked over his right arm and tipped down to pour out water.

Caprarola
Nude male looking to the left. Holds a silver cup in his left hand and a silver pitcher in his right arm.

Dürer
Nude male looking to the left. Holds a cup in his left hand and a pitcher in his right arm.
AQUILA (#4)

Aratus
(312-315): “…hard at hand another bird tosses in storm, of smaller size but cruel in its rising from the sea when the night is waning, and men call it the Eagle [Aquila].”

Manilius
(I.343-345): “Then soars to the heights the bird of mighty Jupiter [Aquila] as though, winging its way with wonted movement, it were carrying thunderbolts; it is a bird worthy of Jupiter and the sky, which it furnishes with awful armaments.”
(V.486-490): “Now I shall tell you of the constellation of the Eagle [Aquila]; it rises on the left of the youth who pours [Aquarius], whom once it carried off from earth, and with wings outspread it hovers above its prey. This bird brings back the thunderbolts which Jupiter has flung and fights in the service of heaven: its appearance marks the twelfth degree of the river-pouring Waterman [Aquarius].”

Sala Bologna
Brown eagle with outstretched wings, painted completely *di sotto in su*.

Caprarola
Similar iconography to Sala Bologna.

Dürer
Wings painted close to body instead of outstretched.
ARA (#5)

Aratus
(402-403): “Below the fiery sting of the dread monster, Scorpion, and near the South is hung the Altar [Ara].”

Manilius
(I.420-432): “Next has heaven a temple of its own, where, its rites now paid, the Altar [Ara] gleams after victory gained when Earth in rage bore forth the monstrous Giants against the skies. Then even the gods sought aid of mighty gods, and Jupiter himself felt the need of another Jupiter, fearing lest his power prove powerless. He saw the earth rising up, so that he deemed all nature was being overthrown; mountains piled on lofty mountains he saw growing; he saw the stars retreating from heights which were now neighbors, heights which brought up the armed Giants, brood of a mother they tore apart, deformed creatures of unnatural face and shape. Nor did the gods know whether anyone could inflict death upon them or whether forces existed greater than their own. Then it was that Jupiter set up the constellation of the Altar, which of all altars shines brightest even now.”
(V.12-18): “On this side [in the southern hemisphere]… [is] the altar of the gods [Ara], at which Olympus pays its vows.”
(V.339): “At the side of Scorpio risen hardly eight degrees what of the Altar [Ara] bearing incense-flame of which its stars are the image?”

Sala Bologna
Marble altar with a relief of a wreath held in place by two rams’ heads. An eagle with outstretched wings is seen in the center.

Caprarola
Marble altar with a fleur de lis in front of an orange background.

Dürer
Completely schematic.
ARGO (#6)

**Aratus**
(342-351): “Beside the tail of the Great Dog [Canis Major] the ship Argo is hauled stern-foremost. For not hers is the proper course of a ship in motion, but she is borne backwards, reversed even as real ships, when already the sailors turn the stern to the land as they enter the haven, and every one back-paddles the ship, but she rushing sternward lays hold of the shore. Even so is the Argo of Jason borne along stern-foremost. Partly in mist is she born along, and starless from her prow even to the mast, but the hull is wholly wreathed in light. Loosed is her rudder and is set beneath the hind feet of the Dog [Canis Major], as he runs in front.”

**Manilius**
(I.412-1.415): “Then famed Argo, raised to the skies from the sea which it was the first to cross, sails upon the depths of the heaven it earned by its brave exploits, made a god for having given safety to gods.”
(V.12-18): “On this side [in the southern hemisphere]… [is] the hero’s ship [Argo] that amid the stars sails even now…”
(V.32-39): “Lord of the flock and conqueror of the sea, to which, a horn lost and robbed even of its fleece, it gave its burden and a name, the Ram [Aries], which bade the magic arts of Colchian Medea journey to Iolcos and spread her poisons throughout the world, even now draws Argo by the poop to its side, as though still on the seas, through the stars on its right. But the foremost part of the poop emerges to show its fires only when the Ram has brought four degrees of his countenance above the horizon.”

**Sala Bologna**
Clouds/mist cover the hull of the ship.

**Caprarola**
Positioned in opposite direction. No clouds depicted. *Fleurs de lis* painted on nave.

**Dürer**
No depiction of water, but includes clouds at hull.
ARIES (#7)

**Aratus**
(225-232): “There too are the most swift courses of the Ram [Aries], who, pursued through the longest circuit, runs not a whit slower than the Bear Cynosura [Ursa Minor] – himself weak and starless as on a moonlit night, but yet by the belt of Andromeda thou canst trace him out. For a little below her is he set. Midway he treads the mighty heavens, where wheel the tips of the Scorpion’s Claws and the Belt of Orion.”

**Manilius**
(I.263-264): “Resplendent in his golden fleece the Ram [Aries] leads the way and looks back with wonder at the backward rising of the Bull [Taurus].”
(IV.124): “The Ram [Aries], who is rich with an abundance of fleecy wool…”

**Sala Bologna**
Seated ram with curled horns and front legs tucked under his belly. Looks back to Taurus. His coat of white fleece is depicted via rough brush strokes.

**Caprarola**
Similar iconography to the Sala Bologna.

**Dürer**
Similar iconography to the Sala Bologna.
AURIGA (#8)

**Aratus**
(156-166): “But if it be thy wish to mark the Charioteer [Auriga] and his stars, and if the fame has come to thee of the Goat [Capella] herself and the Kids, who often on the darkening deep have seen men storm-tossed, thou wilt find him in all his might, leaning forward at the left hand of the Twins [Gemini]. Over against him wheels the top of Helice’s [Ursa Major’s] head, but on his left shoulder is set the holy Goat [Capella], that, as legend tells, gave the breast to Zeus. Her the interpreters of Zeus call the Olenian Goat. Large is she and bright, but there at the wrist of the Charioteer faintly gleam the Kids.”

**Manilius**
(I.361-364): “Next, bearing the footsteps near the crouching Bull [Taurus] comes the Charioteer [Auriga] whose calling won him heaven and a name: first of men to speed in a high chariot behind a team of four, he was seen by Jupiter and hallowed in the skies.”

**Sala Bologna**
Bearded man in a kneeling position. Barefoot, but fully clothed in drapery of pale green, purple, and golden trim, and with strap across his back. No iconography indicating that he is a charioteer.

**Caprarola**
Clothed, but in a belted tunic rather than armor. He looks to the she-goat Capra that is resting on his left shoulder. Holds reins in his right hand.

**Dürer**
Nude male. Capra sits on his left shoulder. Holds reins in his right hand.
BOÖTES (#9)

**Aratus**
(91-95): “Behind Helice [Ursa Major], like to one that drives, is borne along Arctophylax whom men also call Boötes, since he seems to lay hand on the wain-like Bear. Very bright is he all; but beneath his belt wheels a star, bright beyond the others, Arcturus himself.”

**Manilius**
(I.316-319): “In [Hercules’] rear shines the Bearward, called also Boötes; true is the name men have widely given him, threatening-like since he presses forward as one does over a team of bullocks; and he pulls along with him the star Arcturus beneath the middle of his breast.”
(V. 19-26): “On yonder side [in the northern hemisphere]… [is] Boötes [minding] his wain…”
(V.357-358): “[Centaurus] the Archer [Boötes] follows, whose fifth degree shows bright Arcturus to those upon the sea.”

**Sala Bologna**
Barefoot, but fully clothed in soft green, blue, and red. Holds a metal spear in his right hand and wears a leather helmet with a feather. Points up to the tip of Draco’s tail with his left hand. Arcturus is placed between his legs.

**Caprarola**
Includes his two dogs on a leash, to the left. Partially nude, with yellow and red drapery covering his lower mid-section. Wears cloth-like cap on his head. Arcturus is depicted on his cloak.

**Dürer**
Nude, with no hat. Acturus is between his legs.
CANCER (#10)

**Aratus**
(148): “…beneath [Ursa Major’s] waist is the Crab [Cancer]…”

**Manilius**
(I.266): “…[Gemini] the Crab [Cancer] follows…”  
(IV.162-164): “Shining at the hinge of the year by the blazing turning-point which when recalled the Sun rounds in his course on high, the Crab [Cancer] occupies a joint of heaven and bends back the length of the day.”

**Sala Bologna**
Brown and reddish crab.

**Caprarola**
More lobster-like in appearance.

**Dürer**
More lobster-like in appearance.
CANIS MAJOR (#11)

**Aratus**
(326-337): “Such a guardian, too, beneath [Orion’s] towering back is seen to stand on his hind legs, the Dog [Canis Major] starenwrought, yet not clearly marked in all his form, but right by his belly he shows dark. The tip of his terrible jaw is marked by a star that keenest of all blazes with a searing flame and him men call Sirius. When he rises with the Sun, no longer do the trees deceive him by the feeble freshness of their leaves. For easily with his keen glance he pierces their ranks, and to some he gives strength but of others he blights the bark utterly. Of him too at this setting are we aware, but the other stars of the Dog are set round with fainter light to mark his legs.”

**Manilius**
(I.396-411): “At [Orion’s] heels follows the Dog [Canis Major] outstretched in full career; no star comes on mankind more violently or causes more trouble when it departs. Now it rises shivering with cold, now it leaves a radiant world open to the heat of the Sun: thus it moves the world to either extreme and brings opposite effects. Those who from Mount Taurus’ lofty peak observe it ascending when it returns at its first rising learn of the various outcomes of harvests and seasons, what state of health lies in store, and what measure of harmony. It stirs up war and restores peace, and returning in different guise affects the world with the glance it gives it and governs with its mien. Sure proof that the star has this power are its color and the quivering of the fire that sparkles in its face. Hardly is it inferior to the Sun, save that its abode is far away and the beams it launches from its sea-blue face are cold. In splendor it surpasses all other constellations, and no brighter star is bathed in ocean or returns to heaven from the waves.”

(V.12-18): “On this side [in the southern hemisphere]… [is] the Dog [Canis Major] who brings fire upon the entire universe…”

(V.206-208): “But when the lion of Nemea lifts into view his enormous gaping jaws, the brilliant constellation of the Dog [Canis Major] appears: it barks forth flame, raves with its fire, and doubles the burning heat of the sun.”

**Sala Bologna**
White dog with red studded collar.

**Caprarola**
Brown and white dog, much leaner than that in the Sala Bologna.

**Dürer**
Schematic in representation.
CANIS MINOR (#12)

Aratus
(449): “There, too, by the Hydra beneath the Twins [Gemini] brightly shines Procyon [Canis Minor].”

Manilius
(I.412): “[After Canis Major] come Procyon [Canis Minor] and the swift Hare [Lepus].”
(V.197-200): “Procyon [Canis Minor] rises at the moment when Cancer’s twenty-seventh degree ascends from the waves to the stars.”

Sala Bologna
Small red and white furry dog, with raised right front leg.

Caprarola
Small red and white dog with long snout and tail.

Dürer
Similar iconography to Sala Bologna.
CAPRICORNUS (#13)

**Aratus**
(284-285): “[Aquarius] is behind Aegoceros [Capricornus], who is set in front and further down, where the mighty Sun turns.”

**Manilius**
(I.271): “Next comes Capricornus, curled up within his cramped asterism…”

**Sala Bologna**
Brown goat with amphibious tail and white fur on chest and forehead. Front legs partially tucked under body.

**Caprarola**
Front legs completely tucked under body.

**Dürer**
Front legs partially tucked under body, similar to Sala Bologna.
CASSIOPEIA (#14)

**Aratus**  
(188-196): “Eastward [Cepheus’] hapless wife, Cassiopeia, gleaming when by night the moon is full, wheels with her scanty stars. For few and alternate stars adorn her, which expressly mark her form with lines of light. Like the key of a twofold door barred within, wherewith men striking shoot back the bolts, so singly set shine her stars. But from her shoulders so faint she stretches a fathom’s length. Thou would’st say she was sorrowing over her daughter.”

**Manilius**  
(I.354-355): “Next come Cepheus and Cassiopeia, twisting to witness the sacrifice she caused…”  
(V. 19-26): “On yonder side [in the northern hemisphere]… [is] Cepheus [and his wife Cassiopeia] sacrificing his daughter Andromeda…”

**Sala Bologna**  
Sits on a wooden or terracotta throne with a short back. Barefoot, but fully clothed in pale pink, green, and golden gowns. Wears a golden crown and holds a golden scepter in her left hand. Seen from the back, she twists around towards her daughter Andromeda. Her eyes look out to the viewer.

**Caprarola**  
Sits on a wooden throne with a long back that stretches above her head. Wears a green dress with a red cloth draped across her lap. Does not wear a crown, and holds a long green feather in her left hand instead of a scepter.

**Dürer**  
Sits on a throne with a long back that stretches above her head. Nude and holds a feather.
CENTAURUS (#15)

**Aratus**
(436-442): “The constellation of Centaur[us] thou wilt find beneath two others. For part in
human form lies beneath Scorpio, but the rest, a horse’s trunk and tail, are beneath the
Claws [Libra]. He ever seems to stretch his right hand towards the round Altar [Ara], but
though his hand is drawn and firmly grasped another sign – the Beast [Lupus], for so men of
old have named it.”

**Manilius**
(I.417-419): “Then shines the bird that is sacred to Phoebus [Corvus] and with it the Bowl
beloved of Bacchus [Crater] and the Centaur [Centaurus] of twofold form; he is half man,
joined at the waist to the body of a horse.”

**Sala Bologna**
Body of horse is white. Intense facial expression with red cheeks and grayish hair and beard.
Has a green sash across his back that billows out over left shoulder. Holds a shield with his
left hand and thrusts a wooden rod into the mouth of Lupus with his right.

**Caprarola**
Brown hair and beard. Holds pointed shield in left hand.

**Dürer**
Does not hold a shield, though it is depicted near him. Uses both hands to thrust rod into
Lupus.
CEPHEUS (#16)

Aratus
(179-177): “Nor all unnamed shall rest he hapless family of Iasid Cepheus. For their name, too has come unto heaven, for that they were near akin to Zeus. Cepheus himself is set behind the Bear Cynosura [Ursa Minor], like to one that stretches out both his hands. From her tail-tip to both his feet stretches a measure equal to that from foot to foot. But a little aside from his belt look to find the first coil of the mighty Dragon [Draco].”

Manilius
(I.354-355): “Next come Cepheus and Cassiopeia, twisting to witness the sacrifice she caused…”
(V. 19-26): “On yonder side [in the northern hemisphere]… [is] Cepheus sacrificing his daughter Andromeda…”
(V.449): “…Cepheus, [rises] beside the dripping Waterman [Aquarius]…”

Sala Bologna
Barefoot, but fully clothed in yellow, orange, green, and blue drapery. Has blondish hair and wears a golden crown. Arms and hands are outstretched and looks to the left.

Caprarola
Wears brown leather boots and armor of green, red, and white. Looks to the right.

Dürer
Nude with pointed hat. Looks to the right.
CETUS (#17)

**Aratus**
(352-358): “Andromeda, though she cowers a good way off, is pressed by the rush of the mighty Monster of the Sea [Cetus]. For her path lies under the blast of Thracian Boreas, but the South wind drives against her, beneath the Ram [Aries] and the Pair of Fishes [Pisces], the hateful Monster, Cetus, set as he is a little above the Starry River [Eridanus].”

**Manilius**
(I.433-437): “Next to [Ara], Cetus undulates its scaly body; it rises aloft upon a spiral of coils and splashes with such a belly as drove the sea beyond its proper shores when it appeared from the waves to destroy the daughter of Cepheus exposed upon the cliffs.”
(V.579-604): “Now had a heavy surge begun to rise and long lines of breakers were fleeing before the thrust of the massive monster [Cetus]. As it cleaves the waves, its head emerges and disgorges sea, the waters breaking loudly about its teeth and the swirling sea afloat in its very jaws; behind rise its huge coils like rings of an enormous neckchain, and its back covers the whole sea. Ocean clamors in every quarter, and the very mountains and crags quake at the creature’s onset…The beast rises to meet [Perseus], rears its head, twisting it out of the water, leaps aloft upon its support of winding coils, and towers high in the air with all its bulk. But as much as it rises hurtling up from the deep, always so much does Perseus fly higher and mock the sea-beast through the yielding air, and strike its head as it attacks. Yet not submitting to the hero the monster bites furiously at the breezes, though its teeth snap vainly and inflict no wounds; it spouts forth sea towards heaven, drenches its winged assailant with a blood-stained deluge, and sends in spray the ocean to the stars.”
(V.656-658): “On the left, as the last portion of the Fishes [Pisces] rises, appears the constellation of the Whale [Cetus], pursuing Andromeda in heaven as on the sea.”

**Sala Bologna**
Green and red fish, with detail in the scales so that it appears feathery in parts. Yellow eyes and large white teeth.

**Caprarola**
More narrow and rigid than that in the Sala Bologna.

**Dürer**
Similar iconography to Sala Bologna.
CORONA AUSTRA LIS (#18)

Aratus
(400-401): “But other [stars] low beneath the forefeet of the Archer [Centaurus], are tuned in a circled ring [Corona Australis], go wheeling round the sky.”

Manlius
Not included.

Sala Bologna
Wreath of green foliage with a red ribbon.

Caprarola
Wreath of green foliage.

Dürer
Depicted as a crown.
CORONA BOREALIS (#19)

**Aratus**

(71-73): “Here too that Crown [Corona Borealis], which glorious Dionysus set to be a memorial of the dead Ariadne, wheels beneath the back of the toil-spent Phantom [Hercules].”

**Manilius**

(I.319-322): “But on the other side of Boötes floats the Crown’s [Corona Borealis’] lustrous ring, which twinkles with varying luminosity; for the circle is dominated by a single star, which with passing splendor sparkles in the mid forehead and enhances with its blazing flame the bright lights of the constellation. They shine as the memorial of deserted Ariadne…”

(V. 19-26): “On yonder side [in the northern hemisphere]… [is] the heavenly gift of Ariadne’s crown [Corona Borealis…”

**Sala Bologna**

Golden crown with single star in center.

**Caprarola**

Crown with eight stars and four *fleurs de lis.*

**Dürer**

Crown with multiple stars.
CORVUS (#20)

Aratus
(446-448): “Midway on [Hydra’s] coiling form is set the Crater, and at the tip the figure of a Raven [Corvus] that seems to peck at the coil.”

Manilius
(I.417-418): “Then shines the bird that is sacred to Phoebus [Corvus] and with it the Bowl beloved of Bacchus [Crater]…”

Sala Bologna
Black raven perched upon Hydra, with an open beak.

Caprarola
Similar iconography to Sala Bologna.

Dürer
Similar iconography to Sala Bologna.
CRATER (#21)

**Aratus**
(446-447): “Midway on [Hydra’s] coiling form is set the Crater…”

**Manilius**
(I.417-418): “Then shines the bird that is sacred to Phoebus [Corvus] and with it the Bowl beloved of Bacchus [Crater]…”
(V.234-235): “When the last degree of the mighty Lion [Leo] appears at its rising, the Bowl [Crater] comes into view, chased with the gilt of its stars.”

**Sala Bologna**
Silver double-handled cup with larger handle on left. Mask on front.

**Caprarola**
Larger handle on right with snake’s head. No mask on surface.

**Dürer**
Larger handle on right, no embellishment.

![Images of cups](image-url)
CYGNUS (#22)

**Aratus**
(275-281): “For verily in heaven there is outspread a glittering Bird [Cygnus]. Wreathed in mist is the Bird, but yet the parts above him are rough with stars, not very large, yet not obscure. Like a bird in joyous flight, with fair weather it glides to the west, with the tip of its right wing outstretched towards the right hand of Cepheus, and by its left wing is hung in the heavens the prancing Horse [Equuleus].”

**Manilius**
(I.336-341): “Hard by is the place allotted to the Swan [Cygnus]: Jupiter himself placed it in the sky as a reward for the shape with which he snared the admiring Leda, when, a god changed into a snow-white swan, he came down and offered his feathered form to the unsuspecting woman. Now too with outspread wings it flies among the stars.”
(V.19-26): “On yonder side [in the northern hemisphere]… [is] Jupiter in swan’s disguise [Cygnus]…”
(V.364-366): “When the Archer [Sagittarius] has fully emerged from the waves, the Swan [Cygnus] ascends into heaven with this creature’s thirtieth degree, its down and glittering wings figured by stars.”

**Sala Bologna**
White swan with wings outstretched and beak slightly open.

**Caprarola**
Similar iconography to Sala Bologna.

**Dürer**
Similar iconography to Sala Bologna.
DELPHINUS (#23)

**Aratus**
(316-318): “Over Aegoceros [Capricornus] floats the Dolphin [Delphinus] with few bright stars and body wreathed in mist, but four brilliants adorn him, set side by side in pairs.”

**Manilius**
(I.346-347): “Then the Dolphin [Delphinus] too rises starward from the deep, the pride of sea and sky, in each revered.”
(V. 19-26): “On yonder side [in the northern hemisphere]... [is] the Dolphin [Delphinus] seeking to outstrip the swift Arrow [Sagitta]...”
(V.416): “…the sea-dark Dolphin [Delphinus] ascends from Ocean to the heavens and emerges with its scales figured by stars...”

**Sala Bologna**
Grayish/pink dolphin.

**Caprarola**
Similar iconography to Sala Bologna.

**Dürer**
Similar iconography to Sala Bologna.
DRACO (#24)

**Aratus**
(45-62): “Between [Ursa Major and Minor], as it were the branch of a river, circles in wondrous way the Dragon [Draco], winding infinite around and about; on either side of his coil are borne along the Bears [Ursa Major and Minor], that shun evermore the blue sea. Now towards the one he stretches the end of his tail, but with the coil he intercepts the Lesser Bear [Ursa Minor]. The tip of his tail ends by the head of Helice [Ursa Major], but in the coil Cynosura [Ursa Minor] has her head. For his coiled circles past her very head and comes near her feet, but again, turning back, runs upward. Not one lone star shines on his head, but on his brows are two stars lit, and two in his eyes, and one beneath is set upon the chin-point of the dread monster. Aslant is his head, and he seems most like as if he were nodding to the tip of Helice; his mouth and right temple straight confront the end of her tail. That head wheels near where the limits of setting and rising blend.”

**Manilius**
(I.305): “Sprawling between [Ursa Major and Minor] and embracing each, the Dragon [Draco] separates and surrounds them with its glowing stars lest they ever meet or leave their stations.”
(V. 19-26): “On yonder side [in the northern hemisphere] the Dragon [Draco] beckons which glides between the two Bears [Ursa Major and Minor]…”

**Sala Bologna**
Skin tones of red, green, and gray. Wings and hair on face, with jaws snarled open.

**Caprarola**
No wings. Hercules’ foot touches its head.

**Dürer**
No wings.
EQUULEUS (#25)

**Aratus**
(278-281): “Like a bird in joyous flight, with fair weather [Cygnus] glides to the west, with the tip of its right wing outstretched towards the right hand of Cepheus, and by its left wing is hung in the heavens the prancing Horse [Equuleus].”

**Manilius**
Not included.

**Sala Bologna**
Brown horse with white forehead and mane. Front legs hidden behind painted clouds.

**Caprarola**
Similar iconography to Sala Bologna.

**Dürer**
Similar iconography to Sala Bologna.
ERIDANUS (#26)

**Aratus**
(359-366): “For alone are those poor remains of Eridanus, River of many tears, also borne beneath the feet of the Gods. He winds beneath Orion’s left foot, but the Shackles, wherewith the Fishes’ [Pisces’] tails are held, reach from their tails and join together, and behind the neck of Cetus they mingle their path and fare together. They end in a single star of Cetus, set where meet his spine and head.”

**Manilius**
(I.439-442): “To [Pisces Austrinus] are joined the Rivers [Eridanus and the water of Aquarius’ urn] which make their winding way along great curves of stars: Aquarius connects his waters with the upper reaches of the one stream, whilst the other flows from Orion’s out-thrust foot; they meet each other and blend their stars together.”
(V.12-18): “On this side [in the southern hemisphere]… [are] the Rivers [Eridanus and the water from Aquarius] whose winding coils meander far and wide…”

**Sala Bologna**
White and gray river.

**Caprarola**
Similar iconography to Sala Bologna. Phaethon is included at bottom of river.

**Dürer**
Depicted as a simple outline. Large star indicated at bottom of the river.
GEMINI (#27)

**Aratus**
(147): “Beneath the head of Helice [Ursa Major] are the Twins [Gemini]…”

**Manilius**
(I.265): “…[Taurus] with lowered face and brow summons the Twins [Gemini]…”

**Sala Bologna**
Nude babies embracing, each one with an arm outstretched.

**Caprarola**
Babies have an abundance of blonde, curly hair.

**Dürer**
Similar iconography to Caprarola.
HERCULES (#28)

Aratus
(63-72): “Right there in its orbit wheels a Phantom form [Hercules], like to a man that strives at a task. That sign no man knows how to read clearly, nor what task he is bent, but men simply call him On His Knees (Engonasin). Now that Phantom, that toils on his knees, seems to sit on bended knee, and from both his shoulders his hands are upraised and stretch, one this way, one that, a fathom’s length. Over the middle of the head of the crooked Dragon [Draco], he has the tip of his right foot.”

Manilius
(I.314-315): “Next to the chill Bears [Ursa Major and Minor] and the frozen north comes a figure on bended knee [Hercules], the reason for whose posture is known to none but him.”
(V.645-647): “The figure on bended knee [Hercules] and called by the Greek name Engonasin, about whose origin no certainty prevails, brings forth its stars on the right simultaneously with the last portion of the Fishes [Pisces].”

Sala Bologna
Kneeling nude male with a headband. The identity of Hercules is clearly suggested with the inclusion of a wooden club and the skin of the Nemean lion.

Caprarola
Similar iconography to Sala Bologna.

Dürer
Similar iconography to Sala Bologna.
HYDRA (#29)

Aratus
(443-448): “Another constellation trails beyond, which men call the Hydra. Like a living creature it winds afar its coiling form. Its head comes beneath the middle of the Crab [Cancer], its coil beneath the body of the Lion [Leo], and its tail hangs above the Centaur [Centaurus] himself. Midway on its coiling form is set the Crater, and at the tip the figure of a Raven [Corvus] that seems to peck at the coil.”

Manilius
(I.415-416): “Next to [Argo] is the Water-snake [Hydra], whose stars are so arranged as to represent its scaly skin.”
(V.12-18): “On this side [in the southern hemisphere]… [is] the wakeful warder of the Hesperides and the golden treasure [Hydra]…”

Sala Bologna
Similar coloring to Draco, but more subtle. Fins on head, wings at breast, and scaly in texture.

Caprarola
No wings.

Dürer
No wings.
LEO (#30)

Aratus
(149-155): “…Beneath [Ursa Major’s] hind feet the Lion [Leo] brightly shines. There is the Sun’s hottest summer path. Then the fields are seen bereft of corn-ears, when first the Sun comes together with the Lion. Then the roaring Etesian winds fall swooping on the vastly deep, and voyaging is no longer seasonable for oars. Then let broad-beamed ships be my choice, and let steersmen hold the helm into the wind.”

Manilius
(I.266): “…the Lion [Leo] [follows] the Crab [Cancer], and the Virgin [Virgo] the Lion.”

Sala Bologna
Great detail in the fur, especially around the mane and underbelly. Tail is lifted up and then curled down. Furrowed brow and mouth slightly open.

Caprarola
Shown more from the side than from below, as seen especially in the front legs. Tail wraps under back leg.

Dürer
Similar iconography to Caprarola.
LEPUS (#31)

**Aratus**
(338-341): “Beneath both feet of Orion is the Hare [Lepus] pursued continually through all time, while Sirius [in Leo] behind for ever borne as in pursuit. Close behind he rises and as he sets he eyes the setting Hare.”

**Manilius**
(I.412): “[After Canis Major] come Procyon [Canis Minor] and the swift Hare [Lepus].”
(V.157-159): “Now when the Twins [Gemini] lift their fraternal stars into the sky and float on the surface of the sea, their seventh degree brings to view the Hare [Lepus].”

**Sala Bologna**
Light brown hare with ears standing up.

**Caprarola**
Similar iconography to Sala Bologna.

**Dürer**
Similar iconography to Sala Bologna.
LIBRA (#32)

**Aratus**
(88-90): “Toward the Crown [Corona Borealis] leans the Serpent’s [Serpens’] jaw, but beneath his coiling form seek thou for the mighty Claws [Libra]; they are scant of light and nowise brilliant.”

**Manilius**
(I.267): “Then [comes] the Balance [Libra], having matched daylight with the length of night…”

**Sala Bologna**
Golden scales.

**Caprarola**
Similar iconography to Sala Bologna.

**Dürer**
Similar iconography to Sala Bologna.
LUPUS (#33)

**Aratus**
(436-442): “The constellation of Centaur[us] thou wilt find beneath two others. For part in human form lies beneath Scorpio, but the rest, a horse’s trunk and tail, are beneath the Claws [Libra]. He ever seems to stretch his right hand towards the round Altar [Ara], but though his hand is drawn and firmly grasped another sign – the Beast [Lupus], for so men of old have named it.”

**Manilius**
Not included.

**Sala Bologna**
Brown wolf with white fur in mane.

**Caprarola**
Similar iconography to Sala Bologna.

**Dürer**
Similar iconography to Sala Bologna.
LYRA (#34)

Aratus
(268-274): “Yonder, too, is the tiny Tortoise [Lyra], which, while still beside his cradle, Hermes pierced for strings and bade it be called the Lyre: and he brought it into heaven and set it in front of the unknown Phantom [Hercules].”

Manilius
(I.324-330): “…one may see among the stars the Lyre [Lyra], its arms spread apart in heaven, with which in time gone by Orpheus charmed all that his music reached, making his way even to the ghosts of the dead and causing the decrees of hell to yield to his song. Wherefore it has honor in heaven and power to match its origin: then it drew in its train forests and rocks; now it leads the stars after it and makes off with the vast orb of the revolving sky.”
(V.324-328): “Next, with the rising of the Lyre [Lyra], there floats forth from Ocean the shape of the tortoise-shell, which under the fingers of its heir gave forth sound only after death; once with it did Orpheus, Oeagrus’ son, impart sleep to waves, feeling to rocks, hearing to trees, tears to Pluto, and finally a limit to death.”

Sala Bologna
Tortoise-shell stringed instrument.

Caprarola
Eagle-shaped.

Dürer
Eagle-shaped.
OPHIUCHUS (#35)

**Aratus**
(74-87): “To [Hercules’] back the Crown [Corona Borealis] is near, but by his head mark
near at hand the head of Ophiuchus, and then from it you can trace the starlit Ophiuchus
himself; so brightly set beneath his head appear his gleaming shoulders. They would be clear
to mark even at the midmonth moon, but his hands are not at all so bright; for faint runs the
gleam of stars along on this side and on that. Yet they too can be seen, for they are not
feeble. Both firmly clutch the Serpent [Serpens], which encircles the waist of Ophiuchus,
but he, steadfast with both his feet well set, tramples a huge monster, even the Scorpion,
standing upright on his eye and breast. Now the Serpent is wreathed about his two hands –
a little above his right hand, but in many folds high above his left.”

**Manilius**
(I.331-336): “One called Ophiuchus holds apart the Serpent [Serpens] which with its mighty
spirals and twisted body encircles his own, that so he may untie its knots and back that winds
in loops. But, bending its supple neck, the Serpent looks back and returns; and the other’s
hands slide over the loosened coils. The struggle will last forever, since they wage it on level
terms with equal powers.”
(V.389-390): “…Ophiuchus, encircled by the Serpent’s [Serpens’] great coils, rises beside the
figure of Capricorn[us]…”

**Sala Bologna**
Barefoot, but fully clothed in green and red. Gray hair and beard, he looks to the left.
Kneels and holds Serpens around him.

**Caprarola**
Wears brown leather boots, white tights, and an orange tunic with fur trim. Looks to the
right and stands with slightly bent knees. Only right hand clutches Serpens.

**Dürer**
Nude. Left hand is wrapped in Serpens but does not clutch the snake.
ORION (#36)

Aratus
(322-325): “Aslant beneath the fore-body of the Bull [Taurus] is set the great Orion. Let none who pass him spread out on high on a cloudless night imagine that, gazing on the heavens, one shall see other stars more fair.”

Manilius
(I.387-395): “Near neighbor to the Twins [Gemini], Orion may be seen stretching his arms over a vast expanse of sky and rising to the stars with no less huge a stride. A single light marks each of his shining shoulders, and three aslant trace the downward line of his sword; but three mark Orion’s head, which is imbedded in high heaven with his countenance remote. It is Orion who leads the constellations as they speed over the full circuit of heaven.”
(V.12-18): “On this side [in the southern hemisphere] Orion beckons to me, in the mighty sky the mightiest constellation…”
(V.57-63): “Now on the Ram’s [Aries’] left flank and together with its tenth degree rises Orion; mightiest of constellations he girdles with his course the mighty skies: when Orion shines over the horizon drawing heaven in his train, night feigns the brightness of day and folds its dusky wings.”

Sala Bologna
 Fully clothed in leather armor and sandals. Wears a metal helmet and holds a shield in his left hand and a metal club in his right. Kneels and raises both arms over his head.

Caprarola
 Wears armor of green and white, leather boots, and a metal helmet with a large white feather. Holds a wooden club in right hand, red drapery in his left. Looks over left shoulder and kneels with his legs far apart.

Dürer
 Wears armor. Holds wooden club in right hand, cloak in left hand.
PEGASUS (#37)

Aratus
(205-224): “Beneath [Andromeda’s] head is spread the huge Horse [Pegasus], touching her with his lower belly. One common star gleams on the Horse’s navel and the crown of her head. Three other separate stars, large and bright, at equal distance set on flank and shoulders, trace a square upon the Horse. His head is not so brightly marked, nor his neck, though it be long. But the farthest star on his blazing nostril could fitly rival the former four, that invest him with such splendor. Nor is he four-footed. Parted at the navel, with only half a body, wheels in heaven the sacred Horse. He it was, men say, that brought down from lofty Helicon the bright water of bounteous Hippocrene. For not yet on Helicon’s summit trickled the fountain’s springs, but the Horse smote it and straightway the gushing water was shed abroad at the stamp of his forefoot, and herdsmen were the first to call that stream the fountain of the Horse. From the rock the water wells and never shalt thou see it far from the men of Thespiae; but the Horse himself circles in the heaven of Zeus and is there for thee to behold.”

Manilius
(I.348-350): “Him the Horse [Pegasus] in swift career strives to overtake and speeds along, his front distinguished by a resplendent star: this constellation is bounded by Andromeda.”
(V.631-635): “When the twenty-first degree of the rising Fishes [Pisces] illuminates Earth’s threshold and shines upon the world, the winged Horse [Pegasus] will appear and gallop aloft in the heavens.”

Sala Bologna
White horse with wings of green, red, and light yellow. Rear of body is hidden behind a painted cloud.

Caprarola
Similar coloring in the wings, but more of the body is shown.

Dürer
Body shown to end of mid-section.
PERSEUS (#38)

Aratus
(248-252): “[Andromeda’s] two feet will guide thee to her bridegroom, Perseus, over whose shoulder they are forever carried. But he moves in the North a taller form than the others. His right hand is stretched toward the throne of the mother of his bride, and, as if pursuing that which lies before his feet, he greatly strides, dust-stained, in the heaven of Zeus.”

Manilius
(I.358-359): “Perseus even in heaven maintain[s] his former love [for Andromeda] and comes with timely aid, holding up the dread face of the Gorgon.”
(V. 19-26): “On yonder side [in the northern hemisphere]… [is] Perseus, slayer of the abominable Medusa, blade yet in hand…”
(V.567-618): “At length a happy day brought to those shores Perseus returning from his triumph over the monstrous Gorgon. On seeing the girl [Andromeda] fastened to the rock, he, whom his foe had failed to petrify with her aspect, froze in his tracks and scarcely kept his grasp of the spoil: the vanquisher of Medusa was vanquished at the sight of Andromeda. Now he envies the very rocks and calls the chains happy to clasp such limbs. On learning from the maiden's lips the cause of her punishment, he resolves to go through war against the sea to win her hand, undaunted though a second Gorgon come against him. He quickly cuts a path through the air and by his promise to save their daughter's life awakens hope in the tearful parents; with the pledge of a bride he hastens back to the shore. Now had a heavy surge begun to rise and long lines of breakers were fleeing before the thrust of the massive monster. As it cleaves the waves, its head emerges and disgorges sea, the waters breaking loudly about its teeth and the swirling sea afloat in its very jaws; behind rise its huge coils like rings of an enormous neckchain, and its back covers the whole sea. Ocean clamors in every quarter, and the very mountains and crags quake at the creature’s onset. What terror then, unhappy maiden, was expressed on your countenance, defended though you were by such a champion! How all your breath fled into the air! How all the blood ebbed from your limbs, when from the cleft in the rocks you beheld with your own eyes your fate, the avenging monster swimming towards you and driving the waves before it, how helpless you a victim for the sea! Hereupon with a flutter of winged sandals Perseus flies upwards and from the skies hurls himself at the foe, driving home the weapon stained with the Gorgon’s blood. The beast rises to meet him, rears its head, twisting it out of the water, leaps aloft upon its support of winding coils, and towers high in the air with all its bulk. But as much as it rises hurtling up from the deep, always so much does Perseus fly higher and mock the sea-beast through the yielding air, and strike its head as it attacks. Yet not submitting to the hero the monster bites furiously at the breezes, though its teeth snap vainly and inflict no wounds; it spouts forth sea towards heaven, drenches its winged assailant with a bloodstained deluge, and sends in spray the ocean to the stars. The princess watches the duel of which she is the prize and, no longer mindful of herself, sighs with fear for her gallant champion: her feelings more than her body hang in suspense. At last, its frame riddled with stabs, through which the sea fills its body, the beast sinks, returns once more to the surface, and covers the mighty ocean with its massive corpse, still a fearful sight, and not for a maiden’s eyes to look on. Victorious, Perseus bathes his body in clear water and flies from the sea to the lofty crags and releases from the chains which bind her to the rock the girl whose betrothal was sealed by his readiness to fight and who could now become a bride
thanks to the bridegroom’s dowry of her life. Thus did Perseus win place in heaven for
Andromeda and hallow in a constellation the prize of that glorious battle, wherein a monster
no less terrible than the Gorgon herself perished and in perishing relieved the sea of a curse.”

**Sala Bologna**
Blonde youth with brightly colored armor of yellow, green, and purple. Wears winged
sandals and holds the head of Medusa in his left hand. Raises his right arm above his head
and holds a sword aloft. Details of snakes can be seen in Medusa’s hair.

**Caprarola**
Wears armor of light red and green with golden highlights. Longer sword and longer snakes
in Medusa’s hair. Winged feet, not sandals.

**Dürer**
Nude, with winged feet, not sandals.
PISCES (#39)

**Aratus**
(239-247): “Still farther in front of the Ram [Aries] and still in the vestibule of the South are the Fishes [Pisces]. Ever one is higher than the other, and louder hears the fresh rush of the North wind. From both there stretch, as it were, chains, whereby their tails on either side are joined. The meeting chains are knit by a single beautiful and great star, which is called the Knot of Tails. Let the left shoulder of Andromeda be thy guide to the northern Fish, for it is very near.”

**Manilius**
(I.272-273): “…from urn upturned the Waterman [Aquarius] pours forth the wonted stream for the Fishes [Pisces] which swim eagerly into it…”

**Sala Bologna**
Green fish with details of scales in red. A purple ribbon connects the two.

**Caprarola**
Similar iconography to Sala Bologna, with red ribbon.

**Dürer**
Similar iconography to Sala Bologna, with much curlier ribbon.
PISCES AUSTRINUS (#40)

**Aratus**
(385-388): “Below Aegoceros [Capricornus] before the blasts of the South Wind swims a Fish, facing Cetus, alone and apart from the former Fishes [Pisces]; and him men call the Southern Fish [Pisces Austrinus].”

**Manilius**
(I.438-439): “Then rises the Southern Fish [Pisces Austrinus] in the quarter of the wind after which it is named.”

**Sala Bologna**
Grayish/blue fish with red highlights.

**Caprarola**
Longer and leaner species, with green and white coloring.

**Dürer**
Much more monstrous in appearance, with sharply protruding fins.
SAGITTA (#41)

**Aratus**
(311): “Further up there is another Arrow [Sagitta] shot alone without a bow.”

**Manilius**
(I.342-343): “Next shines a constellation which resembles the appearance and flight of an arrow [Sagitta].”
(V. 19-26): “On yonder side [in the northern hemisphere]… [is] the Dolphin [Delphinus] seeking to outstrip the swift Arrow [Sagitta]…”

**Sala Bologna**
Wooden arrow with metal head.

**Caprarola**
Similar iconography to Sala Bologna.

**Dürer**
Similar iconography to Sala Bologna.
SAGITTARIUS (#42)

**Aratus**
(307-308): “For verily his great Bow does the Bowman [Sagittarius] draw close by the Scorpion’s sting, and a little in front stands the Scorpion [Scorpius] at his rising, but the Archer rises right after him.”

**Manilius**
(I.270-271): “… at [Scorpius’] tail the man with body of a horse [Sagittarius] aims with taut bow a winged shaft, ever in act to shoot.”

**Sala Bologna**
Face is bent down and unseen. Body of horse is brown with reddish and white highlights. Wears red cloak attached with a golden band across the back that billows out behind right shoulder. He shoots a metal arrow from a wooden bow at Scorpius’ tail.

**Caprarola**
Corona Australis overlaps his front leg. Wears red hat with a swag of green drapery attached. Body of horse is white, and there is a clearer visual separation between horse and man.

**Dürer**
Wears headband with drapery attached.
SCORPIUS (#43)

**Aratus**  
(307-308): “For verily his great Bow does the Bowman [Sagittarius] draw close by the Scorpion’s sting, and a little in front stands the Scorpion [Scorpius] at his rising, but the Archer rises right after him.”

**Manilius**  
(I.267-270): “Then the Balance [Libra], having matched daylight with the length of night, draws on the Scorpion [Scorpius], ablaze with his glittering constellation, at whose tail the man with body of a horse [Centaurus] aims with taut bow a winged shaft, ever in act to shoot.”

**Sala Bologna**  
Gray scorpion with missing front right arm and claw.

**Caprarola**  
Longer and skinnier scorpion and blacker in color.

**Dürer**  
Rounder in shape.
SERPENS (#44)

Aratus
(77-87): “Both [hands of Ophiuchus] firmly clutch the Serpent [Serpens], which encircles the waist of Ophiuchus, but he, steadfast with both feet well set, tramples a huge monster, even the Scorpion [Scorpius], standing upright on his eye and breast. Now the Serpent is wreathed about his two hands – a little above his right hand, but in many folds high above his left.”
(88-89): “Toward the Crown [Corona Borealis] leans the Serpent’s [Serpens’] jaw, but beneath his coiling form seek thou for the mighty Claws [Libra]; they are scant of light and nowise brilliant.”

Manilius
(I.331-336): “One called Ophiuchus holds apart the Serpent [Serpens] which with its mighty spirals and twisted body encircles his own, that so he may untie its knots and back that winds in loops. But, bending its supple neck, the Serpent looks back and returns; and the other’s hands slide over the loosened coils. The struggle will last for ever, since they wage it on level terms with equal powers.”
(V.389-390): “…Ophiuchus, encircled by the Serpent’s [Serpens’] great coils, rises beside the figure of Capricorn[us]…”

Sala Bologna
Grayish/yellow snake with a stern expression and open mouth.

Caprarola
Similar iconography to Sala Bologna.

Dürer
Schematic in representation.
TAURUS (#45)

**Aratus**  
(167-178): “At the feet of Charioteer [Auriga] seek for the crouching horned Bull [Taurus]. Very lifelike are his signs; so clear defined his head: not by another sign would one mark the head of an ox, since in such ways those very stars, wheeling on either side, fashion it. Oft spoken is their name and not all unheard-of are the Hyades. Broadcast are they on the forehead of the Bull. One star occupies the tip of his left horn and the right foot of the Charioteer [Auriga], who is close by. Together they are carried in their course, but ever earlier is the Bull than the Charioteer to set beneath the West, albeit they fare together at their rising.”

**Manilius**  
(I.263): “…[Taurus] with lowered face and brow summons the Twins [Gemini]…”

**Sala Bologna**  
White and reddish skin. Looks down.

**Caprarola**  
Similar iconography to Sala Bologna.

**Dürer**  
Similar iconography to Sala Bologna.
TRIANGULUM (#46)

Aratus
(233-237): “There is also another sign, fashioned near, below Andromeda, Deltoton [Triangulum], drawn with three sides, whereof two appear equal but the third is less, yet very easy to find, for beyond many is it endowed with stars.”

Manilius
(I.351-354): “There follows, with two equal sides parted by one unequal, a sign seen flashing with three stars and named Deltoton [Triangulum], called after its likeness.”

Sala Bologna
Golden equilateral triangle.

Caprarola
Green in color.

Dürer
Isosceles in shape.
URSA MAJOR (#47)

**Aratus**
(26-44): “Encompassing [the North Pole, the] two Bears [Ursa Major and Minor] wheel together – wherefore they are also called the Wains. Now they ever hold their heads each toward the flank of the other, and are borne along always shoulder-wise, turned alternate on their shoulders. If, indeed, the tale be true, from Crete they by the will of mighty Zeus entered up into heaven, for that when in olden days he played as a child in fragrant Dicton, near the hill of Ida, they set him in a cave and nurtured him for the space of a year, what time the Dictaean Curetes were deceiving Cronus. Now the one men call by name Cynosura [Ursa Minor] and the other Helice [Ursa Major]. It is by Helice that the Achaeans on the sea divine which way to steer their ships, but in the other the Phoenicians put their trust when they cross the sea. But Helice, appearing large at earliest night, is bright and easy to mark; but the other is small, yet better for sailors: for in a smaller orbit wheel all her stars. By her guidance, then, the men of Sidon steer the straightest course.”

**Manilius**
(I.275): “Now where heaven reaches its culmination in the shining Bears [Ursa Major and Minor], which from the summit of the sky look down on all the stars and know no setting.”
(V. 19-26): “On yonder side [in the northern hemisphere] the Dragon [Draco] beckons which glides between the two Bears [Ursa Major and Minor]…”
(V.693-695): “…after completing a revolution round the pole, the Bear [Ursa Major] with muzzle foremost replaces her unceasing steps in her former tracks, never immersed in Ocean but ever turning in a circle…”

**Sala Bologna**
Brown bear with detailed fur and long tail. Looks slightly down with mouth open.

**Caprarola**
Similar iconography to Sala Bologna.

**Dürer**
Similar iconography to Sala Bologna.
**URSA MINOR (#48)**

**Aratus**
(26-44): “Encompassing [the North Pole, the] two Bears [Ursa Major and Minor] wheel together – wherefore they are also called the Wains. Now they ever hold their heads each toward the flank of the other, and are borne along always shoulder-wise, turned alternate on their shoulders. If, indeed, the tale be true, from Crete they by the will of mighty Zeus entered up into heaven, for that when in olden days he played as a child in fragrant Dicton, near the hill of Ida, they set him in a cave and nurtured him for the space of a year, what time the Dictaean Curetes were deceiving Cronus. Now the one men call by name Cynosura [Ursa Minor] and the other Helice [Ursa Major]. It is by Helice that the Achaians on the sea divine which way to steer their ships, but in the other the Phoenicians put their trust when they cross the sea. But Helice, appearing large at earliest night, is bright and easy to mark; but the other is small, yet better for sailors: for in a smaller orbit wheel all her stars. By her guidance, then, the men of Sidon steer the straightest course.”

**Manilius**
(I.275): “Now where heaven reaches its culmination in the shining Bears [Ursa Major and Minor], which from the summit of the sky look down on all the stars and know no setting.”
(I.299-307): “Cynosura [Ursa Minor] is small and wheels round in a narrow circle, less in brightness as it is in size, but in the judgment of the Tyrians it excels the larger bear [Ursa Major]. Carthaginians count it the surer guide when at sea they make for unseen shores. [The bears] are not set face to face: each with its muzzle points at the other’s tail and follows one that follows it. Sprawling between them and embracing each the Dragon [Draco] separates and surrounds them with its glowing stars lest they ever meet or leave their stations.”
(V. 19-26): “On yonder side [in the northern hemisphere] the Dragon [Draco] beckons which glides between the two Bears [Ursa Major and Minor]...”

**Sala Bologna**
Brown bear with detailed fur and short tail. Looks slightly down with mouth closed.

**Caprarola**
Similar iconography to Sala Bologna.

**Dürer**
Long tail.
Aratus
(96-136): “Beneath both feet of Boötes mark the Maiden [Virgo], who in her hands bears the gleaming Ear of Corn [Spica]. Whether she be daughter of Astraeus, who, men say, was of old the father of the stars, or child of other sire, untroubled be her course! But another tale is current among men, how of old she dwelt on earth and met men face to face, nor ever disdained in olden time the tribes of men and women, but mingling with them took her seat, immortal though she was. Her men called Justice; but she assembling the elders, it might be in the market place or in the wide-wayed streets, uttered her voice, ever urging on them judgments kinder to the people. Not yet in that age had men knowledge of hateful strife, or carping contention, or din of battle, but a simple life they lived. Far from them was the cruel sea and not yet from afar did ships bring their livelihood, but the oxen and the plough and Justice herself, queen of the peoples, giver of things just, abundantly supplied their every need. Even so long as the earth still nurtured the Golden Race, she had her dwelling on earth. But with the Silver Race only a little and no longer with utter readiness did she mingle, for that she yearned for the ways of the men of old. Yet in that Silver Age was she still upon the earth; but from the echoing hills at eventide she came alone, nor spoke to any man in gentle words. But when she had filled the great heights with gathering crowds, then would she with threats rebuke their evil ways, and declare that never more at their prayer would she reveal her face to man. “Behold what manner of race the fathers of the Golden Age left behind them! Far meaner than themselves! But ye will breed a viler progeny! Verily wars and cruel bloodshed shall be unto men and grievous woe shall be laid upon them.” Even so she spoke and sought the hills and left the people all gazing towards her still. But when they, too, were dead, and when, more ruinous than they which went before, the Race of Bronze was born, who were the first to forge the sword of the highwayman, and the first to eat of the flesh of the ploughing-ox, then verily did Justice loathe that race of men and fly heavenward and took up that abode, where even now in the night time the Maiden is seen of men, established near to far-seen Boötes.”

Manilius
(I.266): “…the Virgin [Virgo] follows the Lion [Leo]…”

Sala Bologna
Barefoot, winged maiden, clothed in a white dress with detailed embroidery at the neckline and tied at the waist with a sash. Her golden hair is in a single braid down her back and she wears a crown of leaves and flowers. In her right hand she holds more flowers and in her left she holds a bushel of wheat with the star Spica. Her wings are multicolored with pink, orange, and green feathers.

Caprarola
Similar white belted dress, without embroidery at the neckline. Holds nothing in right hand and left hand is in front of body and unseen. Spica is not included.

Dürer
Holds nothing in right hand.
Appendix 2: Extant Celestial Ceilings in Italy, 1300-1700

BASSANO DI SUTRI

- Figures 227, 228
- Bibliography: Puglisi 1999

CAPRAROLA

Sala del Mappamondo, Palazzo Farnese. **Horoscopic** ceiling fresco, attributed to Giovanni de’ Vecchi, c. 1574. Commissioned by Cardinal Alessandro Farnese.
- Figures 56, 57
- Bibliography: Grant, M 1960; Lippincott 1990A; Partridge 1995; Quinlan-McGrath 1997; Urban 2010

FERRARA

Sala dei Mesi, Palazzo Schifanoia. **Encyclopedic** wall frescos, Francesco del Cossa, Cosmè Tura, Ercole de’Roberti, c. 1470. Commissioned by Duke Borso d’Este.
- Figures 184, 186, 187

Salone on the **piano nobile**, Casa Cestarelli. **Horoscopic** ceiling fresco, Dosso Dossi, c. 1530. Commissioned by Alberto del Sebastiano Cestarelli.
- Figure 221
- Bibliography: Mezzetti 1982

FLORENCE

Old Sacristy, San Lorenzo. **Commemorative** fresco in the cupola of the high altar, attributed to Giuliano d’Arrigo called Pesello, or Leon Battista Alberti, 1439 or 1442. Commissioned by Cosimo de’ Medici il Vecchio.
- Figures 232, 233
Pazzi Chapel, Santa Croce. **Commemorative** fresco in the cupola of the high altar, after 1459. Commissioned by the Pazzi family, possibly Andrea Pazzi.

- Figures 234
- Bibliography: Blume 2006; Lapi Ballerini 1988


- Figures 222, 223
- Bibliography: Cox-Rearick 1984; Rousseau 1983


- Figure 224
- Bibliography: Cox-Rearick 1984; Rousseau 1983


- Figure 230
- Bibliography: Bandini 2010; Campbell, M 1977

**MANTUA**


- Figure 217

Sala dello Zodiaco, Palazzo d’Arco. **Encyclopedic** wall frescoes, Giovan Maria Falconetto, 1520. Commissioned by Gian Luigi Gonzaga.

- Figures 188, 189


- Figures 199, 200
- Bibliography: Gombrich 1950; Lippincott 1984


- Figures 225, 226
- Bibliography: Fiorini Galassi 1984
MASER

- Figure 204
- Bibliography: Lewis 1990; Pesenti 1996; Reist 1985

MONTAGNANA

Cappella della Madonna del Rosario, Duomo. **Commemorative** fresco in the half dome of the chapel, after 1478.
- Figure 235
- Bibliography: Lucco 2004

PADUA

Gran Salone, Palazzo della Ragione. **Encyclopedic** wall frescos, Giotto c. 1314, repainted after the fire of 1420 by Niccolò Miretto and Stefano da Ferrara in 1425-1440. Commissioned by the Comune di Padova.
- Figures 190, 191
- Bibliography: Antoniazzi Rossi 2007; Barzon 1924; Bornoroni 2006; Cessi 1960; Costaperaria 2000, 1998; Federici Vescovini 1986; Gunzburg (forthcoming); Puppi 1983; Rigobello Autizi and Autizi 2008; Saxl 1985; Vio 2009

PARMA

Camera di Griselda, Castello Roccabianca. **Encyclopedic** ceiling fresco, 1458-1464. Commissioned by Pier Maria Rossi, Count of Berceto.
- Figures 192, 193
- Bibliography: Campari 1910; Haughey 1997; Lippincott 1985

PERUGIA

Sala delle Udienze (Collegio di Cambio), Palazzo dei Priori. **Encyclopedic** ceiling fresco, Perugino, 1498-1500. Commissioned by the Arte del Cambio.
- Figures 194, 195, 196
- Bibliography: Bombe 1914; Dacos 1998; Galassi 1997; Garibaldi 1995; Venturi, L 1995
ROME

*Allegory of Astronomia*, Stanza della Segnatura, Palazzo Vaticano. **Horoscopic** fresco in ceiling corner, Raphael, 1508-1511. Commissioned by Pope Julius II.
- Figure 216

Sala di Galatea, Villa Farnesina. **Horoscopic** ceiling fresco, Baldassare Peruzzi, c. 1511. Commissioned by Agostino Chigi.
- Figure 215

Chigi Chapel, Santa Maria del Popolo. **Encyclopedic** mosaic in the cupola of the dome, designed by Raphael, c. 1513 (constructed c. 1516). Commissioned by Agostino Chigi.
- Figures 197, 198
- Bibliography: Brandt 1986, 1985; Gruner and Grifi 1839; Shearman 1961

Sala dei Pontefici, Borgia Apartments, Palazzo Vaticano. **Horoscopic** ceiling fresco, Perino del Vaga and Giovanni da Udine, 1520-1521. Commissioned by Pope Leo X.
- Figures 218, 219
- Bibliography: Cox-Rearick 1984; Quinlan-McGrath 2005; Rousseau 1983; Urban 2010

Sala dello Zodiaco, Palazzo Cesarini. **Horoscopic** ceiling fresco, after 1521. Commissioned by Cardinal Alessandro Cesarini.
- Figure 220
- Bibliography: Lucatoni 2004

Sala Bologna, Cortile di San Damaso, Palazzo Vaticano. **Cartographic** ceiling fresco, Lorenzo Sabatini and others, 1575. Commissioned by Pope Gregory XIII.
- Figure 1

- Figure 205
- Bibliography: Lohaus 2008; Malquori 2006; Rudolphi 2012; Saxl 1985

- Figures 206, 207
- Bibliography: Puglisi 1998; Rossi 1994; Wallach 1974
Apollo with the Zodiac, loggia of the piano nobile, Palazzo Verospi. Encyclopedic ceiling fresco, Francesco Albani, c. 1611-1612. Commissioned by Cardinal Ferrante Verospi.
- Figure 208
- Bibliography: Bodmer 1936; Puglisi 1999

- Figure 229
- Bibliography: Lechner 1976; Scott 1991; Urban 2010

The Apotheosis of Romulus, Sala di Romolo, Palazzo Altieri. Horoscopic ceiling fresco, Domenico Maria Canuti, 1676. Commissioned by Cardinal Paluzzo Altieri.
- Figure 231
- Bibliography: Safarik 1999

TRENT

Stanza dello Zodiaco, Palazzo Sardagna. Encyclopedic ceiling fresco, Marcello Fogolino, after 1533.
- Figure 201
- Bibliography: Puppi 1966; Zampetti 1947

UDINE

Salone Centrale, Palazzo Antonini. Encyclopedic ceiling fresco, Giulio Quaglio, 1697. Commissioned by Count Antonio Antonini.
- Figures 209, 210
- Bibliography: Perusini 2003

VICENZA

- Figure 202
- Bibliography: Barioli 1973; Villa 2002
Appendix 3: Archival Documents

3.A
Memorie sulle pitture et fabbriche di Gregorio XIII
BAV, Bonc.D.5, ff. 240r-241v

La Sala detta la Bologna, dove sono depinte nel mezzo della volta i dodeci segni Celesti con una prospettiva di colonne adornata di varie figure, e nella prima parieti vi è depinta Bologna in pianta con il suo territorio, nella 2ª Bologna con l'edificij alzati, e nella terza vi son doi quadri, in uno de quali è depinto Gregorio non con li decreti, e nel secondo Bonifacius ottavo che conferma i privilegij alli Dottori e scolari del studio di Bologna. Tutta l'opera di pitture fu ordinata e designata da Lorenzo Sabbatini, e molte cose fatte di sua propria mano, ma li dodeci segni celesti nominati li ordinò Giovan Ant. Varesi.

3.B

molto allegra, per il colore del Cielo, de’ fiori, et delle foglie: et per esse fatta solamente sopra le colonne tonde (eccetto ne gl’angoli) viene ad esser detta loggia molto aperta & ampla, dove molto commodamente capiscono le figure, che seggono tra l’una coppia delle colonne, et l’altra, le quali sono molto artificiosamente dipinte in scorcio, et rappresentano li più famosi Astronomi che fin qui siano stati, et pare che stiano contemplando le stelle, delle quarantotto immagini del Cielo, che sono dipinte in una figura ovale nel mezo della volta: et se bene è impossibile di ridurre l’ottava sfera del Cielo con le sue immagini in una figura piana ovale, et che le immagini stiano al luogo suo, qui non dimeno non importa niente, non havendo à servire per altro, che per ornamento di quella loggia, et non s’havendo con esse à fare osservazione alcuna.

3.C

Descrizione del Palazzo Pontificio di San Pietro in Vaticano fatta nel pontificato di s.m. di Benedetto XIII, (ex biblioteca Iosephi Garampii 1754 (in a different hand))

ASR, MS. 496, f. 408v (original p. 811)

Ritornati nell’8ª Stanza ove nella facciata accapo v’è la porta già descritta con sguinci da questa parte tutti dipinti, quale sceso un gradino con stipiti et architrave di travertino scorniciati e orecchiati con iscrizione nell’architrave.

Clemens VIII Pont. Max.

(In left margin: La Bologna i6ª) questa introduce nella stanza detta della Bologna tutta dipinta a fresco: nella volta v’è un ovato grande nel mezo con campo azuro dentro al quale vi sono dipinti diversi segni del Zodiaco: sotto a detto ovato vi finge una Loggia scoperta con quantità di colonne di pietre mischie, che formano archi, e sotto al basamento sedono diverse figure rappresentati differenti scrittori d’Astrologia, e Geografia con cornice attorno, sotto della quale su la dritta subito usciti della porta, v’è sopra le 2 finestre grandi con parapetti vuoti corrispondenti nel Cortile de Falegnami in larghezza di tutta la facciata, una veduta o prospetto della città di Bologna (da cui riceve la denominazione questa stanza) e nel vano tra una finestra, e l’altra v’è una figura rappresentante la Provincia, o Stato di essa Città con diversi ornati, pietre mischief, e figura a chiaroscuro, nei sguinci, e parapetti delle medesime finestre. Nella facciata grande, che resta accapo vi sono due porte, una finta e l’altra aperta corrispondente nelle stanze, ove si conservano le casse dell’Agnus Dei. Sopra di esse porte, che sono ornate con frontespizi dipinti vi sono due nicchie una per ciascuna con figure rappresentanti una la Fertilità, l’altra la Pace, et in mezzo tra dette porte si vedono tutte le Città, Terre, e Castelli subordinati di quello Stato. Nella facciata minore di rimpetto a quella delle finestre v’è la pinata della medesima città di Bologna, dai lati della quale vi sono effigiati 2 Pontefici assistiti da Prelati, e Cardinali. Da un lato di questa facciata, che resta incontro la prima finestra v’è porta con sguinci da questa parte dipinti con riquadri di chiaro scuro corrispondente nelle terze Logge del Cortil di San Damaso detto delle Logge; nella facciata accanto, cioè dell’ingresso, vi sono 3 porte 2 finte, et una che introduce in questa stanza, sopra delle quali vi sono dipinte 3 prospettive di Logge con sue balaustrate essendovi 2 nicchie framezzo con dentro una figura per ciascuna rappresentanti la Giustizia, e la Pace; il resto della facciata è dipinto con altre figure, Arme di Gregorio XIII e diverse ai riquadrature di pietre mischie.
Appendix 4: Glossary of Astrological Terms

Armillary Sphere
An instrument used since the Hellenistic age for astronomical calculation. Built of concentric rings representing the meridian lines of the celestial sphere.

Ascendant
The point at which the ecliptic crosses the Earth’s eastern horizon at a specific time and place. In Renaissance astrology, one’s ascendant or rising sign was the zodiacal constellation that was rising on the eastern horizon at a specific time and place. This sign is located on the cusp of the first house on a natal chart and is the most significant factor in one’s chart.

Autumnal Equinoctial Colure
In celestial cartography, the imaginary line that passes through the north and south poles and the autumnal equinox.

Celestial Equator
In celestial cartography, the imaginary line projected onto the celestial sphere that mirrors the terrestrial equator.

Celestial Sphere
Not to be confused with the concept of Divine Spheres, the celestial sphere in astrology/astronomy is an observer’s view of the sky, as if all the stars and planets were contained within a giant sphere that rotates around the Earth.

Decan
Each section of the zodiac is divided into 30º; each 30º segment can be divided into three equal sections of 10º, called a decan.

Descendant
Directly opposite the ascendant, the descendant is the point at which the ecliptic crosses the Earth’s western horizon at a specific time and place. In Renaissance astrology, one’s descendant sign was the zodiacal constellation that was setting on the western horizon at a specific time and place. This sign is located on the cusp of the seventh house on a natal chart.

Divine Spheres
The Aristotelian system of the universe in which eight concentric spheres encompass and rotate around the central Earth. Each sphere contained a planet and the system was ordered as follows outward from the Earth: the Moon, Mercury, Venus, the Sun, Mars, Jupiter, Saturn, and the fixed stars. These spheres were believed to be operated by God in the Catholic reinterpretation of the system.

Easter (date of)
The council of Nicaea in 325 AD established that Easter was to be celebrated on the first Sunday after the first full moon after the vernal equinox. If that date fell on the Jewish Passover, Easter would be celebrated the following Sunday.
Ecliptic
An imaginary line projected onto the celestial sphere that represents the yearly path of the Sun.

Electoral Astrology (Catarchic)
A branch of judicial astrology in which an astrologer consults the heavens for the most opportune time to commence an important event such as a building campaign, an election, a crusade, etc.

Equinox
In celestial cartography, the point at which the ecliptic crosses the celestial equator.

Extra-Zodiacal Constellations
All of the constellations that are not part of the zodiac.

General Astrology
A branch of judicial astrology that interprets the impact of significant celestial events, such as eclipses and planetary conjunctions. Similar to the belief in celestial omens, these events were thought to have a wide-ranging impact on the general population.

Geocentric Universe
A theory of the universe in which the Earth is located at the center and all other bodies, including the Sun, orbit around it.

Heliocentric Universe
First proposed by Nicholas Copernicus, and thus also known as the Copernican system. A theory of the universe in which the Sun is located at the center and all other bodies, including the Earth, orbit around it.

Horary Astrology (Interrogatory Astrology)
A branch of judicial astrology in which a client would consult an astrologer with a specific question, and through the consultation of the sky or astronomical tables the astrologer would answer the query based on the position of the stars and planets at that moment.

Horoscope (Nativity, Natal Chart)
From the Greek horoskopeion, or view of the hour. A horoscope is a chart that shows the positions of the Sun, Moon, planets, and zodiacal constellations at a specific time and place. In the Renaissance the chart was shaped as a square.
House
The system of division for a horoscope chart. Based on antique models, a horoscope chart in the Renaissance was divided into twelve houses, each of which ruled over a different aspect of the native’s life. The astrologer interpreted meaning based on which planets and zodiacal constellations occupied the different houses. The first house is located on the ascendant, and the remaining houses follow in clockwise rotation. According to the ancient Roman astrologer Marcus Manilius (*Astronomicon* II.861-958), the twelve houses ruled as follows: I: character and life in general (the most important); II: estate and fortune; III: siblings; IV: home and family; V: children and love; VI: health; VII: relationships; VIII: death and inheritance; IX: travels; X: success; XI: friendships and alliances; XII: enemies and misfortunes.

Judicial Astrology
Interpreting the movements of the stars and planets to predict the events of one’s life or future.

Lower Heaven (*imum coeli*)
Halfway between the descendant and ascendant, the lower heaven is the point where the meridian crosses the ecliptic below the horizon. The lower heaven is located on the cusp of the fourth house on a horoscope chart.

Luminary
In modern day astronomy and astrology the Sun and the Moon are referred to as luminaries.

Meridian Line
An imaginary line marking a predetermined angular measure in the sky such as the ecliptic or celestial equator.

Mid-Heaven (*medium coeli*)
Halfway between the ascendant and descendant, the mid-heaven is the point where the meridian crosses the ecliptic above the horizon. The mid-heaven is located on the cusp of the tenth house on a horoscope chart.
Mundane Astrology
The calculation of the movements of the planets and stars to predict celestial phenomena such as eclipses and planetary conjunctions, and natural phenomena, such as weather and the return of the harvest. This type of astrology additionally played a significant role in medieval and Renaissance medicine.

Natal Astrology (Genethialogy)
A branch of judicial astrology in which an astrologer would study the sky at the time of one’s birth to create a horoscope that would reveal each aspect of his or her life.

Natal Chart
See Horoscope.

Native
The subject of a horoscope/natal chart. For example, the native of a horoscope showing the birth of Agostino Chigi would be Chigi himself.

Natural Astrology
See Mundane Astrology.

Planets
In Renaissance astrology and astronomy the seven known planets included the Moon, Mercury, Venus, the Sun, Mars, Jupiter, and Saturn. Each planet has a specific glyph or symbol.

Planisphere
A circular map centered on either an equatorial or ecliptic pole.

Rising Sign
See Ascendant.

Summer Solstice
In celestial cartography, the point at which the ecliptic crosses the Tropic of Cancer (+23.5°).
Summer Solstitial Colure
In celestial cartography, the meridian line that passes through the north and south poles and the Summer Solstice.

Sun Sign
The Sun’s month-long position in a particular zodiacal sign is called the Sun sign and is used in modern-day astrology.

Vernal Equinoctial Colure
In celestial cartography, the meridian line that passes through the north and south poles and the vernal equinox.

Winter Solstice
In celestial cartography, the point at which the ecliptic crosses the Tropic of Capricorn (-23.5º).

Winter Solstitial Colure
In celestial cartography, the meridian line that passes through the north and south poles and the Winter Solstice.

Zodiac
A division of twelve equal sections divided along the ecliptic of 30º each. These twelve sections are also called signs, after the constellations whose names they share. The signs of the zodiac are: Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius, Capricorn, Aquarius, and Pisces. The signs of the zodiac represent this geometric division of degrees; the constellations of the same names are physical groupings of stars and do not correspond exactly to these 30º sections in the sky. Each zodiacal sign has a specific glyph or symbol.

Aries
Taurus
Gemini
Cancer
Leo
Virgo
Libra
Scorpio
Sagittarius
Capricorn
Aquarius
Pisces
## Zodiacal Rulerships

<table>
<thead>
<tr>
<th>House</th>
<th>Sign</th>
<th>Ruled by</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Aries</td>
<td>Mars</td>
</tr>
<tr>
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<td>Taurus</td>
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</tr>
<tr>
<td>3</td>
<td>Gemini</td>
<td>Mercury</td>
</tr>
<tr>
<td>4</td>
<td>Cancer</td>
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</tr>
<tr>
<td>5</td>
<td>Leo</td>
<td>Sun</td>
</tr>
<tr>
<td>6</td>
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<td>Mercury</td>
</tr>
<tr>
<td>7</td>
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<tr>
<td>8</td>
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</tr>
<tr>
<td>9</td>
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</tr>
<tr>
<td>10</td>
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<td>Saturn</td>
</tr>
<tr>
<td>12</td>
<td>Pisces</td>
<td>Jupiter</td>
</tr>
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</table>
Appendix 5: Gregory XIII’s Horoscopes

Birth of Ugo Boncompagni: January 7, 1502 (Sun sign of Capricorn)
Sunset/Vespers in Bologna = approximately 4:53 pm
Based on Musotti and Ciappi, Gregory’s rising sign is Leo

Alessandro Musotti, BAV, Bonc.D7, f.5r: “Osservò il suo nascimento essatissimam.l, esso scrisso in un libretto di suo pugno, che fu l’anno 1502 à hore di notte due e quarti tre, fu tenuto al Battesimo da un valente Astrologo, che non mi ricordo il nome et si lasciava intendere molto alla libera che sua figliolo otterebbe il primato nella chiesa di Dio, senza sapesti il fondamento di questo sua pensiero.”

- Ugo born at 2 ¾ hours into the night: Vespers + 2 ¾ = 7:38 pm
- This account is especially interesting as it tells that an astrologer was present at Ugo’s birth


- Ugo born at 2 hours into the night: Vespers + 2 = 6:53 pm

Pauli Bombini, Gregorius Teriusdecimus Pontificus Maximus, BAV, Barb.lat.2675, f.58r: “Ugorem, septima Januarij die, saeculi sextidecimi anno 1502, in commun.m mortalium lucem. Bononia edictum, die septimadecima mensis eiusdem, uera salutis luci, Christiani lavacri unda peperere.”

- No time listed

---

767 My thanks to Darrelyn Gunzburg for the construction of Gregory’s charts.
Election of Gregory XIII: May 13, 1572 (Sun sign of Taurus)
Sunset/Vespers in Rome = approximately 7:20 pm
Based on Musotti, Ciappi, Leti, and Petrucelli, Gregory’s electional horoscope yields an
ascendant sign of Virgo.

Alessandro Musotti, BAV, Bonc.D7, f.12r: “[Il] Conclave, quale a fatica fu chiuso, che fu
chiuso alle otto hore di notte, e il di 12 g Maggio, et usci Ponteficie alle 22 hore il giorno
seguente, che fu li 13 di Maggio.”

- Gregory elected at 22 hours into the night: Vespers + 22 = 5:20 pm

Marc’Antonio Ciappi, Compendio delle heroiche et gloriose attioni et santa vita di Papa Greg. XIII
(Rome: Stamperia de gli Accolti, 1591), 3-4: “Dopo la quale, passati quei pochi giorni, ne’ i
quali si suole acconciare il Conclave, entrati li Signori Cardinali in esso alli 12. il giorno
seguente di Martedì 13. di Maggio 1572. con meraviglioso, & universale consenso loro, &
indicibile sodisfattione del Popolo, che lo desiderava, fu creato Sommo Ponteficie esso Ugo
Cardinal Buoncompagno, che volse esser chiamato Gregorio XIII. & fu poi coronato alli 25
del medesimo mese, giorno festivo della pentecoste…”

- No time listed

Gregorio Leti, Conclavi dei Pontefici Romani: quali si sono potuti trovare fin à questo giorno: de’quali si
vede la tavola nel foglio seguente (Rome, 1667), 191: “…e con meraviglioso consenso di tutto il
Collegio su adorato, e salutato Vicario di Christo, non essendo durato il negotio piu, che
dalle 15 hore fino alle 21…”

- Gregory elected at 21 hours into the night: Vespers + 21 = 4:20 pm

Paul Herre, Papsttum und Papstwahl im Zeitalter Phillips II (Leipzig: Teubner, 1907), 225-226:
Zelebrierung der Heiligen-Geist-Messe begaben sich die Kardinäle in feierlichem Zuge in die
dafür vorbereiteten Räume. Am Nachmittag fand dann in der Oauliner Kapelle eine
Kongregation statt, wo die Vereidigung der an der Bewachung des Konklaves Beteiligten
vorgenommen wurde. Man verlas noch einige Briefe italienischer Fürsten. Sie waren von
den diesen Häusern angehörenden Kardinälen überreicht worden, da Gesandte in dieser
Versammlung nicht erschienen waren. Nachts 10 ½ Uhr wurde das Konklave geschlossen.”

- Conclave closed at 10 ½ hours into the night: Vespers + 10 ½ = 5:50 am

Ferdinando Petrucelli, Histoire Diplomatique des Conclaves, vol. 2 (Paris: Lacroix,
Verboeckhove and Cie, 1864), 230: “C’était le 14 mai. La négociation de sa nomination avait
commencé le matin à 15 heures et était finie à 21. En six heures on l’avait fait pape.”

- Gregory elected at 21 hours into the night: Vespers + 21 = 4:20 pm
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ALONZI 2003

ANNIUS OF VITERBO 1552

ANTONIAZZI ROSSI 2007

APPLEBAUM 2000

APULEIUS 1913

AQUINAS 1955-1957

AQUINAS 1947

ARATUS 1921

ARCHER 1941

ARISTOTLE 1933

ARISTOTLE 1922

ARMAND 1887
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AUGUSTINE 1982

AUGUSTINE 1950

AVILÉS 1996

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BELLUCCI 2004

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BENEDETTI 2002

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BERTOZZI 1994

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BIAGIOLI 1993

BIAGIOLI 1989

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BLUME 2009

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BLUME 2006

BLUME 2002

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CECCARELLI 2011C

CECCARELLI 2011D
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CHARLES 1913C

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INCERTI 2008

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JAFFÉ 1999

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JOYCE 2004
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KANAS 2006

KELLER 2008

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KIDD 1997

KIDD 1981

KIEFER 2000

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KRISTELLER 1985

KRUFT 1994

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KUNTZ 2003

KUNTZ 1999

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LINDBERG AND NUMBERS 1986

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LIPPINCOTT 1994
LIPPINCOTT 1993

LIPPINCOTT 1992

LIPPINCOTT 1991A

LIPPINCOTT 1991B

LIPPINCOTT 1990A

LIPPINCOTT 1990B

LIPPINCOTT 1989

LIPPINCOTT 1985

LIPPINCOTT 1984

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LOHAUS 2008

LONG 2009

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LOWE 2011

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LUCCI 2010

LUCCO 2004

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MARONGIU 2008

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MEZZETTI 1982

MONTGOMERY 1994

MORELLO 1992

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MORSE 2007

MOSLEY 2007

MOSLEY 2006
MOSSHAMMER 1981

MURAOKA 2009

MURDOCH 1990

NEPPI 1975

NESSELRATH 1984

NEWMAN AND GRAFTON 2011

NOBIS 1983

NORMAN 1995

NORTH 1986

NUTI 2011
NUTI 1999

NUTTON 1993

OJETTI 1913-14

OLMI 1982

OLMI 1978

OLMI AND PRODI 1986

OLSON 1985

OLSON 1984

OLSON 1979

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OLSON AND PASACHOFF 2007
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PIETRANGELI 1990

PIGOZZI 2007

PILLSBURY 1997
PINE 2008

PINELLI 1994

PINETTI 1924

PINGREE 2008

PINGREE 1982

PINGREE 1973

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PLINY THE ELDER 1855

PLUTARCH 1970

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PODESTÀ 1877
POLYDORE VERGIL 2002

POPPER 2006

POSSANZA 2004

PREMUDA 2008

PROCLUS 1992

PROCTER 1945

PRODI 1975

PRODI 1962

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PTOLEMY 2000
PTOLEMY 1998

PTOLEMY 1940

PTOLEMY 1907

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PUGLISI 1998

PUPPI 1983

PUPPI 1966

QUINLAN-MCGRATH 2005

QUINLAN-MCGRATH 2001

QUINLAN-MCGRATH 1997

QUINLAN-MCGRATH 1995

QUINLAN-MCGRATH 1986

QUINLAN-MCGRATH 1984
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REEVES 1997

REIST 1985

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RIGHINI, D 2011

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ROCHBERG 1998

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ROUSSEAU 1983

ROWLAND 1998

ROWLAND 1997

ROWLAND 1984

RUDOLPHI 2012

RUFINI 2012
RUFFINI 2009

RUFFINI 2005

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SAMBIN DE NORCEN 2011A

SAMBIN DE NORCEN 2011B

SAMBIN DE NORCEN 2011C


SAXL 1957B

SAXL 1957C

SAXL 1957D

SAXL 1957E

SAXL 1934

SAXL 1915-1953

SCHROEDER 1978

SCHULZ 1990

SCHULZ 1987

SCHULZ 1961

SCHÜTTE 1993
SCHWEIKHART 1985

SCOTT 1991

SENECA 1910

SERLUPI CRESCENZI 1992A

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SETTLE 1990

SEVERI 1983

SEZNEC 1953

SHAPIRO 1958

SHEARMAN 1972A

SHEARMAN 1972B
SHEARMAN 1961

SHEPHERD 1995

SHUMAKER 1973

SHUMAKER 1972

SIGNORINI 1989

SIGNORINI 1988

SIMEONI 1940

SJÖSTRÖM 1978

SNYDER 2007

SOLDATI 1906

SOLMSEN 1979

SPATHARAKIS 1978
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STEELE 1932

STRABO 1879

SUETONIUS 1914

SUTER 1969

SWERDLOW 1996

SWERDLOW 1993

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TAJA 1750

TARÁN 2008A
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THORNTON 1991

THURSTON 1949

TOBEY 1994
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URBAN 2011A

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VARESE 1984

VARRO 1912
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VENDITTI 2008

VENTURI, L 1955

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WESTMAN 1980

WHITE 1896

WILD 1981

WILSON 2002
WIND 1938

WINKELMANN 1986

WISCH 1990

WITCOMBE 2009

WOLFE 1984

WOODWARD 2007A

WOODWARD 2007B

WORTHEN 1997

WRIGHT 2000

WÜRTERNBERGER 1940
YATES 1964

ZACCAGNINI 1930

ZAHO 2004

ZAMPETTI 1947

ZIPPEL 1910

ZOLLIKOFER 2012

ZUCCARI 2012

ZUCCARI 2005

ZUCCARI 1998
Illustrations

Fig. 1 Ceiling of the Sala Bologna
Fig. 2  Vault of the Sala Bologna
Photo by Factum Arte
Fig. 3 North and east walls of the Sala Bologna
Fig. 4  South and east walls of the Sala Bologna
Fig. 5 North and west walls of the Sala Bologna
Fig. 6  South and west walls of the Sala Bologna
Fig. 7  South wall of the Sala Bologna with the city of Bologna and Decretal scenes

Fig. 8  West wall of the Sala Bologna with the countryside of Bologna
Fig. 9  North wall of the Sala Bologna with a perspectival view of Bologna and the allegory of Bononia

Fig. 10  East wall of the Sala Bologna
Fig. 11 Giovanni Battista dei Cavalieri, *Opening of the Holy Door*, 1575, engraving

Fig. 12 Papal medal honoring Gregory XIII showing the opening of the *porta sancta*, 1575
Fig. 13 Pietro de’ Nobili, *The Seven Churches of Rome*, 1575, engraving

Fig. 14 Marc’Antonio Ciappi, *Portrait of Gregory XIII*, 1595, engraving
Fig. 15 Aerial view of the Cortile di San Damaso

Fig. 16 Exterior of the Cortile di San Damaso
Fig. 17 Étienne Dupérac, *View of Rome*, 1577, engraving
Fig. 18  Antonio Tempesta, *Translation of the Relics of St. Gregory Nazianzus*, 1580, fresco, Terza Loggia

Fig. 19  Giovanni Guerra, *Piazza of St. Peter’s and the Vatican Palace*, 1588, fresco, Terza Loggia
Fig. 20  Interior of the Prima Loggia, 1575

Fig. 21  Detail of a vault in the Prima Loggia, 1575
Fig. 22 Interior of the Seconda Loggia, 1576

Fig. 23 Ceiling of the Seconda Loggia, 1576
Fig. 24  Paul Letarouilly, plan of the Seconda Loggia, 1857
1. Sala dei Foconi
2. Sala dei Foconi
3. Saletta dei Foconi
4. Saletta dei Foconi
5. Cappellina Comune
6. Cappella Matilde
Fig. 25  Ceiling of the first Sala dei Foconi, 1576, fresco, Seconda Loggia

Fig. 26  Ceiling of the second Sala dei Foconi, 1576, fresco, Seconda Loggia
Fig. 27 Ceiling of the first Saletta dei Foconi, 1576, fresco, Seconda Loggia

Fig. 28 Ceiling of the second Saletta dei Foconi, 1576, fresco, Seconda Loggia
Fig. 29  Cappellina Comune, 1576, Seconda Loggia

Fig. 30  Ceiling of the Cappellina Comune, 1576, fresco, Seconda Loggia
Fig. 31  Interior of the Terza Loggia, 1580
Fig. 32 World maps in the Terza Loggia, 1580
Fig. 33  Martino Longhi il Vecchio, plan for the Pianterreno, 1574, pen and watercolor  
(Accademia Nazionale di San Luca, Fondo Mascarino, 2480)

Fig. 34  Martino Longhi il Vecchio, plan for the Terza Loggia, 1574, pen and watercolor  
(Accademia Nazionale di San Luca, Fondo Mascarino, 2481)
Fig. 35  Paul Letarouilly, plan of the Terza Loggia, 1857
A. Sala della Congregazione
C. Sala Bologna
Fig. 36 Sala delle Congregazione, Terza Loggia
Photo by author

Fig. 37 Plan of the Sala Bologna
Fig. 38  View of the exterior of the Sala Bologna
Photo by author

Fig. 39  View from the northern windows in the Sala Bologna
Photo by author
Fig. 40 View of the vault in the Sala Bologna
Photo by Nadja Aksamija
Fig. 41 Corner vault of the Sala Bologna: SVMMA // RELIGIO

Fig. 42 Corner vault of the Sala Bologna: PACIS // CON / SER / VA / TOR
Fig. 43  Corner vault of the Sala Bologna: PROVI / DENTIAE

Fig. 44  Corner vault of the Sala Bologna: OB // AN / NONÆ // COP / IAM
Fig. 45 Marble floor of the Sala Bologna
Fig. 46  Photograph of the Sala Bologna, 1908

Fig. 47  Photograph of the cracks in the vault of the Sala Bologna, 1934
Fig. 48 Photograph of the restoration of the ceiling in the Sala Bologna, 1934
Fig. 49 Photograph of the restoration of the ceiling in the Sala Bologna, 1934

Fig. 50 Detail of the constellation Boötes on the ceiling of the Sala Bologna
Fig. 51 Photograph of the *giornate* in the vault of the Sala Bologna, 1939

Fig. 52 Factum Arte photographic campaign of the Sala Bologna in 2011
Fig. 53  Processing of the facsimile of the Sala Bologna’s south wall in Factum Arte’s Madrid lab, 2011

Fig. 54  View of the facsimile of the Sala Bologna’s south wall installed in the Museo della Storia di Bologna, in Bologna, 2011
Fig. 55 Giovanni Antonio Vanosino da Varese, Ecumenical Council, 1565
Fig. 56 Giovanni de’ Vecchi, ceiling of the Sala del Mappamondo, 1564, fresco, Palazzo Farnese, Caprarola
Fig. 57 Sala del Mappamondo, 1565, Palazzo Farnese, Caprarola

Fig. 58 Altemps Globe, c. 1567, Vatican Museums
Fig. 59  Lorenzo Sabatini, preparatory sketch for the figure of Theut, c. 1575, Hessisches Landesmuseum, Darmstadt, Inv. AE 1533

Fig. 60  Lorenzo Sabatini, preparatory sketch for the figure of Atlas, c. 1575, Hessisches Landesmuseum, Darmstadt, Inv. AE 1534
Fig. 61  Pellegrino Tibaldi, ceiling of the Sala di Ulisse, 1554-1555, fresco, Palazzo Poggi, Bologna

Fig. 62  Pellegrino Tibaldi, corner detail of the ceiling of the Sala di Ulisse, 1554-1555, fresco, Palazzo Poggi, Bologna
Fig. 63  Raphael, detail of the *School of Athens*, 1508-1511, fresco, Stanza della Segnatura, Palazzo Vaticano
Fig. 64  Ottaviano Mascherino, preliminary drawing for the *quadratura* in the Sala Bologna, c. 1575, Biblioteca Comunale di Palermo

Fig. 65  Ottaviano Mascherino, drawing of the *loggia* in the Sala Bologna, Albertina Gallery, Vienna, mappe IX, Inv. 1399, Abb. 7
Fig. 66  Albrecht Dürer, *Imagines Coeli Septentrionales cum duodecim imaginibus zodiaci*, 1515, woodcut

Fig. 67  Albrecht Dürer, *Imagines Coeli Meridionales*, 1515, woodcut
Fig. 68  Johannes Honter, detail of the constellation Auriga from *Imagines Constellationum Borealiun*, 1532, woodcut

Fig. 69  Gerard Mercator, Celestial Globe, 1551, Greenwich, National Maritime Museum
Fig. 70 François Demongenet, Celestial Globe Gores, c. 1560, woodcut, Württembergische Landesbibliothek, Stuttgart

Fig. 71 Johannes Schöner, Celestial Globe Gores, c. 1515, woodcut
Fig. 72 Johannes Honter, *Imagines Constellationum Borealium*, 1532, woodcut
Fig. 73  Pellegrino Tibaldi, *Fall of Phaethon*, drawing, Museum of Fine Arts, Boston

Fig. 74  Pellegrino Tibaldi, ceiling of the Sala di Fetonte, fresco, 1554-1555, Palazzo Poggi, Bologna
Fig. 75  Engraving after Pellegrino Tibaldi’s *Fall of Phaethon* from the ceiling of the Sala di Fetonte, Palazzo Poggi, Bologna

Fig. 76. Michelangelo, *Fall of Phaethon*, 1533, drawing, Windsor Castle, Royal Library, Windsor, inv. 12766
Fig. 77  Sodoma, *Fall of Phaethon*, 1505-1507, oil on canvas, Worcester Art Museum, Worcester
Fig. 78  Sebastiano del Piombo, figure of Phaethon from the Sala di Galatea, 1511, fresco, Villa Farnesina, Rome

Fig. 79  Detail of the Altemps Globe, c. 1567, Vatican Museums
Fig. 80  Giovanni Antonio Vanosino da Varese and Egnazio Danti, Map of the Western Hemisphere, 1580, fresco, Terza Loggia, Palazzo Vaticano

Fig. 81  Egnazio Danti and Antonio Danti, Map of Sardinia, 1580-1581, fresco, Galleria delle Carte Geografiche, Palazzo Vaticano
Fig. 82 Bartolomeo Passerotti, Study for a Dragon’s Head, 1572, drawing, Gabinetto Disegni e Stampe di Palazzo Rosso, Genoa, inv. 2555
Fig. 83 Pavement of the Cappella Gregoriana, St. Peters, Rome
Photo by author

Fig. 84 Boncompagni Coat of Arms, Galleria delle Carte Geografiche, Palazzo Vaticano
Photo by author
Fig. 85  Detail of the constellation Draco, ceiling of the Sala Bologna

Fig. 86  Detail of the constellation Draco, ceiling of the Sala del Mappamondo, Caprarola

Fig. 87  Albrecht Dürer, detail of the constellation Draco, 
*Imagines Coeli Septentrionales cum duodecim imaginibus zodiaci*, 1515, woodcut
Fig. 88  Cartographic projection methods
Fig. 89  Ptolemy, detail of the stars in the constellation Virgo, *Almagest*, 1528 edition

Fig. 90  Albrecht Dürer, detail of the constellation Orion, *Imagines Coeli Septentrionales cum duodecim imaginibus zodiaci*, 1515, woodcut
Fig. 91  Alessandro Piccolomini, description of differing stellar magnitudes from *de le stelle fisse* (83r), 1540

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Fig. 92  Alessandro Piccolomini, Orion, *de le stelle fisse* (100r), 1540
Fig. 93  Tomb of the Monkey, Etruscan, early fifth century BC

Fig. 94  Francisco de Hollanda, reconstruction of the ceiling in the Sala della volta dorata of Nero's Domus Aurea, 1538

Fig. 95  Alain Manessona Mallet, *Eclipse and Phases of the Moon*, 1683, tinted prints
Fig. 96 Andrea del Castagno, *Uomini Famosi*, 1448, frescoes from the Villa Carducci, Legnaia, now in the Uffizi, Florence

Fig. 97 Raphael, *School of Athens*, 1508-1511, fresco, Stanza della Segnatura, Palazzo Vaticano
Fig. 98 Tintoretto, *Aristotle*, 1560s, oil on canvas, Biblioteca Marciana, Venice
Fig. 99  Lorenzo Sabatini, Seth, Sala Bologna
Fig. 100  Agnolo Gaddi, *Seth at the Entrance to Paradise/The Death of Adam*, c. 1380, fresco, Cappella Maggiore, Santa Croce, Florence

Fig. 101  Cenni di Francesco di Ser Cenni, *The Death of Adam*, 1410, fresco, Cappella della Croce, San Francesco, Volterra
Fig. 102 Giovanni Baglione, *The Sons of Seth*, 1588-1589, fresco, Salone Sistino, Palazzo Vaticano
Fig. 103  Pinturicchio, ceiling of the Sala dei Santi, 1492-1494, fresco, Borgia Apartments, Palazzo Vaticano
Fig. 104  Lorenzo Sabatini, Theut, Sala Bologna
Fig. 105  Figure of Thoth from the Temple of Medinut Habu, c. 1186-1155 BC, Luxor, Egypt
Photo by author
Fig. 106 Lorenzo Sabatini, Atlas, Sala Bologna
Fig. 107  Baldassare Peruzzi, *The Triumph of Fortune*, 1526, woodcut

Fig. 108  Papal medal honoring Julius III, c. 1550-1555
Fig. 109 Giulio Bonasone, *Emblems of Achilles Bocchius*, mid sixteenth century, engraving

Fig. 110 Jacopo Zucchi, *Assembly of the Gods*, 1575, oil on copper
Fig. 111  Battista Zelotti, *Atlas, Geometry, Astrology and the River Nile*, c. 1556, ceiling of the Biblioteca Marciana, Venice

Fig. 112  Farnese Atlas, second-century Roman copy of a Hellenistic Greek statue, Museo Archeologico Nazionale, Naples
Fig. 113  Lorenzo Sabatini, Isis, Sala Bologna
Fig. 114  Situla, Egyptian, fourth century BC, bronze

Fig. 115  Statue of Isis with a situla, c. 120-150, marble, British Museum, London
Fig. 116  Lorenzo Sabatini, Thales, Sala Bologna
Fig. 117 Francesco Marcolino da Forti, *Thales*, from *Le Sorti*, 1540, woodcut

Fig. 118 Rubens, Portrait of Thales, seventeenth century, drawing, British Museum, London
Fig. 119  Photograph of a solar eclipse during totality

Fig. 120  Giorgione, detail of an armillary sphere and solar eclipse, fresco, c. 1504-1505, Castelfranco Veneto

Fig. 121  Raphael, *Isaac, Rebecca, and Abimelech*, 1518-1519, fresco, Loggia, Palazzo Vaticano
Fig. 122  Lorenzo Sabatini, Anaximenes, Sala Bologna

Fig. 123  Detail of Anaximenes, Sala Bologna
Photo by Nadja Aksamija
Fig. 124  Aquarius, from a ninth-century French manuscript of Aratus’ Phaenomena, Biblioteek der Rijksuniversiteit, Leiden, MS. Voss. lat. quarto. 79, fol. 48v

Fig. 125  Giovanni Marco Cinicio, Gemini, from a ninth-century Italian manuscript of Aratus’ Phaenomena, The Morgan Library and Museum, New York, M. 389 Latin MS, Phaenomena, f. 23v
Fig. 126  Lorenzo Sabatini, Aratus, Sala Bologna
Fig. 127  *Celestial Globe with Two Figures*, late sixteenth century, drawing

Fig. 128  Detail of Aratus, Sala Bologna
Photo by Nadja Aksamija
Fig. 129  Map of Greece from c. 1470 manuscript of Ptolemy’s *Geography*, BAV, MS. Vat. lat. 3811

Fig. 130  Celestial map from 1541 printed edition of Ptolemy’s *Planisphaerium*
Fig. 131 Joos van Gent, *Ptolemy*, from the portrait series for Duke Federico da Montefeltro’s *studiolo* in the Palazzo Ducale, Urbino, c. 1475, now in the Louvre

Fig. 132 Palma Giovane, *Ptolemy*, 1575-1595, fresco, Sala del Senato, Doge’s Palace, Venice
Fig. 133 Girolamo Mocetto, figure of Ptolemy from a series of twenty-five grisailles, late fifteenth/early sixteenth century, Musée Jacquemart-Andre, Paris

Fig. 134 Veronese, Allegory of Navigation with an Astrolabe: Ptolemy, 1557, oil on canvas, Los Angeles County Museum of Art
Fig. 135  Raphael, detail of *The School of Athens*, 1508-1511, fresco, Stanza della Segnatura, Palazzo Vaticano
Fig. 136  Lorenzo Sabatini, Ptolemy, Sala Bologna
Fig. 137  Lorenzo Sabatini, Marcus Manilius, Sala Bologna

Fig. 138  Beccafumi, *Fall of Marcus Manilius*, fresco, 1530s, Sala del Concistoro, Palazzo Pubblico, Siena
Fig. 139  Detail of Marcus Manilius

Fig. 140  Flipped horoscope chart held by Manilius

Fig. 141  Natal chart of Ugo Boncompagni

Fig. 142  Medieval astrologer, fresco, fifteenth century, south wall of the Gran Salone, Palazzo Ragione, Padua
Photo by Darrelyn Gunzburg
Fig. 143  Lorenzo Sabatini, Alfonsus Rex, Sala Bologna

Fig. 144  Detail of Alfonsus Rex, Sala Bologna
Photo by Nadja Aksamija
Fig. 145  Engraving of Pellegrino Tibaldi’s ceiling of the Sala d’Ulisse, Palazzo Poggi, Bologna, 1756

Fig. 146  Engraving of Pellegrino Tibaldi’s 1554-1555 quadratura on the ceiling in the Sala di Fetonte, Palazzo Poggi, Bologna
Fig. 147  Engraving of Tommaso Laureti’s c. 1562 *quadratura* on the ceiling in the Sala Senatoria, Palazzo Vizzani, Bologna, from Danti’s commentary on Vignola’s *Le due regole della prospettiva pratica*.

Fig. 148  Print of Tommaso Laureti’s c. 1562 fresco decoration of the Sala Senatoria, Palazzo Vizzani, Bologna.
Fig. 149 Detail of the quadratura in the Sala Bologna
Photo by author

Fig. 150 Detail of the quadratura in the Sala Bologna
Photo by author
Fig. 151  Detail of the west wall of the Sala Bologna with the countryside of Bologna

Fig. 152  Ambrogio Lorenzetti, * Allegory of Good and Bad Government*, 1338-1340, fresco, Palazzo Pubblico, Siena
Fig. 153  Detail of the south wall of the Sala Bologna with the city of Bologna

Fig. 154  Detail of the south wall of the Sala Bologna with the city of Bologna
Fig. 155  Detail of the north wall of the Sala Bologna with a perspectival view of Bologna
Fig. 156  Detail of the north wall of the Sala Bologna with a perspectival view of Bologna
Fig. 157  Papal medal honoring Gregory XIII with the allegory of *Annona*

Fig. 158  Alphonsus Ciacconus, *Gregory XIII’s Portrait with Building Works* from *Vitae et res gestae Pontificum Romanorum*, 1677
Fig. 159  Papal medal honoring Gregory XIII with the allegory of *Bononia*

Fig. 160  Papal medal honoring Gregory XIII with the allegory of *Securitas*

Fig. 161  Papal medal honoring Gregory XIII with the allegory of *Instizia*
Fig. 162 *Pacis*, west wall of the Sala Bologna
Fig. 163 *Annona*, west wall of the Sala Bologna
Fig. 164  Bononia, north wall of the Sala Bologna
Fig. 165  Papal medal honoring Julius III

Fig. 166  Giulio Bonasone, *Allegory of Bononia*, 1555, engraving, British Museum, London
Fig. 167 *Securitas*, east wall of the Sala Bologna
Fig. 168  *Instizia*, east wall of the Sala Bologna
Fig. 169  Lower emblematic frieze, west wall of the Sala Bologna

Fig. 170  Upper emblematic frieze, south wall of the Sala Bologna

Fig. 171  Lower emblematic frieze, south wall of the Sala Bologna

Fig. 172  Lower emblematic frieze, north wall of the Sala Bologna
Fig. 173  Galleria delle Carte Geografiche, 1580-1581, Cortile del Belvedere, Palazzo Vaticano
Fig. 174 Ulisse Aldrovandi, *The Boncompagni Dragon*, 1572, Biblioteca Universitaria, Bologna, Aldrovandi, 4, Tavole di animali, 130

Fig. 175 Papal medal honoring Gregory XIII
Fig. 176  Hercules, thirteenth century, MS 1036, Bibliothèque de l’Arsenal, Paris

Fig. 177  Hercules, twelfth century, MS 614, Bodleian Library, Oxford
Fig. 178  Giusto de’ Menabuoi, *The Creation of the World*, 1370-1378, fresco, Baptistry, Padua

Fig. 179  Giovanni di Paolo, *Expulsion from Eden*, 1445, tempera and gold on panel, Metropolitan Museum of Art, New York
Fig. 180  Reconstruction of the original ceiling in the Sistine Chapel

Fig. 181  Piermatteo d’Amelia, ink wash of the original ceiling in the Sistine Chapel, 1480s
Fig. 182  Raphael, *Council of the Gods*, 1517-1518, fresco, ceiling of the Loggia of Psyche, Villa Farnesina, Rome

Fig. 183  Giovanni Lanfranco, *Council of the Gods*, 1620s, fresco, ceiling of the Sala della Loggia, Villa Borghese, Rome
Fig. 184  Francesco del Cossa, Cosmè Tura, and Ercole de’ Roberti, Sala dei Mesi, c. 1470, fresco, Palazzo Schifanoia, Ferrara

Fig. 185  Limbourg Brothers, August, from the *Très Riches Heures du Duc de Berry*, 1412-1416
Fig. 186  Detail of April from the Sala dei Mesi

Fig. 187  Detail of April from the Sala dei Mesi
Fig. 188  Giovan Maria Falconetto, Sala dello Zodiaco, 1520, fresco, Palazzo d’Arco, Mantua

Fig. 189  Detail of June from the Palazzo d’Arco
Fig. 190 Giotto, Gran Salone, c. 1314, fresco, repainted after the fire of 1420 by Nicolò Miretto and Stefano da Ferrara in 1425-1440, Palazzo Ragione, Padua

Fig. 191 Detail of the Palazzo Ragione
Fig. 192 Camera di Griselda, 1458-1464, fresco, Castello di Roccabianca, Parma

Fig. 193 Ceiling of the Camera di Griselda
Fig. 194  Perugino, Collegio di Cambio, 1498-1500, fresco, Palazzo dei Priori, Perugia

Fig. 195  Ceiling of the Collegio di Cambio

Fig. 196  Detail of Apollo from the Collegio di Cambio
Fig. 197  Raphael, design for the cupola mosaics in the Chigi Chapel, 1513, Santa Maria del Popolo, Rome

Fig. 198  Detail of Mars from the Chigi Chapel
Fig. 199  Giulio Romano, Sala dei Venti, 1527-1528, fresco, Palazzo del Te, Mantua

Fig. 200  Ceiling of the Sala dei Venti
Fig. 201 Marcello Fogolino, ceiling of the Stanza dello Zodiaco, after 1533, fresco, Palazzo Sardagna, Trent
Fig. 202  Domenico Brusasorci, ceiling of the audience hall in the Palazzo Chiericati, 1557-1558, fresco, Vicenza

Fig. 203  Prospero Fontana, The Fall of Phaethon, 1560, ceiling fresco, Sala degli Dei, Palazzo Vitelli a Sant’Egidio, Città di Castello
Fig. 204  Paolo Veronese, ceiling of the Sala dell'Olimpo, 1559-1561, fresco,
Villa Barbaro, Maser
Fig. 205  Jacopo Zucchi, Galleria Rucellai, 1586-1590, fresco, Palazzo Ruspoli, Rome
Fig. 206  Caravaggio, *Jupiter, Neptune, and Pluto*, c. 1599, oil on plaster, Villa Boncompagni-Ludovisi, Rome

Fig. 207  Detail of *Jupiter, Neptune, and Pluto*, pre restoration
Fig. 208 Francesco Albani, ceiling of the Loggia in the Palazzo Verospi, c. 1611-1612, fresco, Rome
Fig. 209 Giulio Quaglio, Salone Centrale, 1697, fresco, Palazzo Antonini, Udine

Fig. 210 Detail of the Palazzo Antonini
Fig. 211  Mantegna, ceiling of the Camera degli Sposi, 1465-1474, fresco, Palazzo Ducale, Mantua

Fig. 212  Alessandro Pampurino, ceiling of the Casa Maffi, c. 1500, fresco, Cremona

Fig. 213  Correggio, ceiling of the Camera di San Paolo, 1519, fresco, Parma
Fig. 214 Jacobus Rueff, *Astrologer at a Birth*, from *De conceptu et generatione*, 1587, woodcut
Fig. 215  Baldassare Peruzzi, ceiling of the Sala di Galatea, 1510, fresco, Villa Farnesina, Rome
Fig. 216  Raphael, *Astronomia*, 1508-1511, fresco, ceiling of the Stanza della Segnatura, Palazzo Vaticano
Fig. 217  Lorenzo Leonbruno, ceiling of the Camera dello Zodiaco, 1519-1523, fresco, Castello di San Giorgio, Palazzo Ducale, Mantua
Fig. 218  Perino del Vaga and Giovanni da Udine, ceiling of the Sala dei Pontefici, 1520-1521, fresco, Borgia Apartments, Palazzo Vaticano

Fig. 219  Ceiling of the Sala dei Pontefici
Fig. 220  Ceiling of the Sala dello Zodiaco, c. 1520, fresco, Palazzo Cesarini, Rome
Fig. 221 Dosso Dossi, ceiling of a room on the *piano nobile* of the Casa Cestarelli, c. 1530, fresco, Ferrara
Fig. 222  Vasari, Sala degli Elementi, 1555-1557, Palazzo Vecchio, Florence

Fig. 223  Vasari, Castration of Saturn, 1555-1557, oil on canvas, ceiling of the Sala degli Elementi, Palazzo Vecchio, Florence
Fig. 224  Vasari, *Apotheosis of Cosima*, 1563-1565, oil on canvas, ceiling of the Sala Grande, Palazzo Vecchio, Florence
Fig. 225  Lorenzo Costa, ceiling of the Stanza dello Zodiaco, 1579, fresco,  
Palazzo Ducale, Mantua  
Photo by author

Fig. 226  Detail of the ceiling in the Stanza dello Zodiaco  
Photo by author
Fig. 227  Francesco Albani, gallery in the Palazzo Giustiniani, 1609, fresco, Bassano di Sutri

Fig. 228  Detail of the ceiling in the Palazzo Giustiniani
Fig. 229 Andrea Sacchi, *Divine Wisdom*, 1629-1633, fresco, Saletta di Anna Colonna, Palazzo Barberini, Rome
Fig. 230 Pietro da Cortona, ceiling of the Sala di Apollo, 1642, fresco, Palazzo Pitti, Florence
Fig. 231  Domenico Maria Canuti, *Apotheosis of Romulus*, 1676, fresco, Sala di Romolo, Palazzo Altieri, Rome
Fig. 232  Giuliano d'Arrigo called Pesello, cupola of the Old Sacristy, 1422 or 1439, fresco, San Lorenzo, Florence

Fig. 233  Detail of the cupola in the Old Sacristy
Fig. 234  Fresco of the cupola in the Pazzi Chapel, after 1459, Santa Croce, Florence
Fig. 235  Fresco of the half dome of the Cappella della Madonna del Rosario, 1448 or 1478, Duomo of Montagnana, outside Padua
Fig. 236 Tycho Brahe, illustration of the 1572 supernova from *De Nova et Nullius Aevi Memoria Prius Visa Stella*, 1573